FOREST AND STREAM.

A WEEKLY JOURNAL OF THE ROD AND GUN.

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STATE GAME REFUGES.

Two interesting letters which we print this week call renewed attention to the desirability of action by State and city governments toward the preserving untouched of wild areas of country, and the making such wild areas attractive by introducing and protecting the various creatures native to the soil.

It is generally known that, for economic purposes, great tracts of the United States public domain have been set aside and reserved as preserves of one sort and another. The forest reserves of the Federal Government aggregate more than sixty million acres, but it is not generally known that nearly 1,700,000 acres of land have been set aside by some of the States as State parks, State forest reserves and preserves, State forest stations and State forest tracts. These, however, are found in only a very few States. Pennsylvania has more than 300,000 of these acres, New York 1,250,000, California a little more than 40,000, Michigan more than 57,000, Minnesota more than 20,000 and Massachusetts less than 15,000. These areas are, as stated, of State creation, and must not be confounded with the measures introduced in Congress looking to the establishment of a national park in Minnesota and another in the Appalachian range.

All the States of the Union agree that the game should be preserved, and pass laws to that end, but along with the preservation of game should go also the establishment of localities where that game may live and thrive, free from molestation, and even from fear of harm.

To the average human being, living wild animals are, of all things, the most attractive. Who does not remember the circus and the menagerie of his youth, and his joy to-day in watching wild creatures undisturbed? It is quite within our power, if we wish it, to have within easy reach of us haunts of these wild creatures, where they shall be so free from fear that we may see them at almost any time. Examples of the natural tameness of all wild creatures are so familiar that they hardly need be cited. The game in the Yellowstone Park, the wild ducks in certain preserved sections of Florida, the water fowl of far Laysan, the wild fowl which in their migrations continually alight with the domesticated wild fowl in the New York Zoological Society's Park in the Bronx, all show very clearly that what we in our stupid, civilized way call wild creatures are really not wild creatures, but are fellow beings only too glad to live with us in peace and amity if we will permit it. Wildness—meaning fear of man—is an acquired habit.

In every State in the Union there are great tracts of land unoccupied and useless in the sense that they make no financial return—yield no income—to their owners. Such lands, as so often said, ought to be purchased by the State, and, being left in their present condition of wildness, might be stocked with native game. The cost would be trifling—the mere fencing of the tract, and the wages of men who should patrol it—but the return in pleasure, in interest to the citizens of the different States, would be very great—absolutely out of proportion to the cost of the park.

Massachusetts—usually in the van where progress is concerned—has seen the wisdom of such a course and has established no less than twelve reservations of this nature. Some of them are very small, being little more than twenty acres in area, others much larger, as the Bluehills reservation of 4,850 acres.

The time is coming when the public of the different States will demand action of this sort by their legislators, and the sooner that time comes the better for all of us.

The character of the land to be set aside will, of course, vary in different sections of the country. In New England and the East such lands are likely to consist largely of barren mountain sides, increased, perhaps, by areas of abandoned farms. In the West, marsh lands which are irreclaimable and liable to frequent overflow, may fitly be set aside in the same way, while the South possesses great areas of canebrake and low land subject to overflow, which might be made parks and preserves. The subject is well worth attention and careful thought by all our readers.

NEW JERSEY PROHIBITION.

THE shooting of "fowls, pigeons and birds," after the manner commonly known as trap shooting, is made unlawful within the State of New Jersey by act of the Legislature of that State, which met in special session on Wednesday of last week. The act is to take effect on and after July 4 next. It is so comprehensively worded that it absolutely prohibits, for trapshooting purposes, the use of crows, sparrows or pigeons, or, in fact, any other kind of birds. Its prohibition is absolute in general and in particular. It ends pigeon shooting.

The prohibitive area is growing. The immense territory, all New England and New York, is thus still further enlarged by New Jersey's adverse act. In the West, the opposition grows also. Iowa recently prohibited the sport in question by statutory enactment. Several other States have shown open hostility or threatening disapproval of it, and it is fair to infer that other States will prohibit it.

The act of the New Jersey Legislature is specially disastrous to this sport. New Jersey's trapshooting interests, from the viewpoint of financial investment and quantity, surpass those of any other State. It was the most active section in respect to pigeon shooting. Within its boundaries are situate the houses and grounds of three famous, wealthy clubs, namely, the Riverton Gun Club, of Philadelphia, the Carteret Gun Club, of New York, and the Westminster Kennel Club, the latter a recent immigrant to that State. The many thousands of dollars invested by these clubs will be lost so far as the trapshooting features are concerned.

Of the New York clubs, the Hell Gate Gun Club, the Emerald Gun Club, the New York German Gun Club, and others, with an exceedingly large membership in the aggregate, will either become inoperative or will disband.

The moral effects of this law will be still more important and far reaching, for with such an important precedent for guidance, the Legislatures of other States are encouraged to vigorous action against pigeon shooting; and, furthermore, they will find weaker opposition to prohibitive legislation.

However, in this connection, be the loss to the sport what it may, the sport of shooting at the traps is not ruined. Its devotees have still unrestricted liberty to shoot at targets, which, after all, is no mean test of skill, although it will never hold so high a place as pigeon shooting in the esteem of the relatively small class which devotes itself to that form exclusively.

In any case, when pigeon shooting is prohibited by law in any section, it is incumbent on all good citizens to obey the law and the laws.

NEW JERSEY BEACH BIRDS.

THE actions of the Legislatures of New York and New Jersey during the session now ending, present a strong contrast. In New York, after a hard battle, the bill providing for the repeal of the anti-spring wild fowl shooting bill was defeated, while New Jersey formally enacted that shore birds or bay snipe may be shot from the 1st of May to the 31st day of December. In other words, may be shot throughout the breeding season and during the whole time that they are with us. All protection is withdrawn from this group of birds.

This action is extraordinary and regrettable. It is opposed to the sentiment with regard to game protection of the country at large, and we believe to the sentiment of the great majority of the sportsmen of the State of New Jersey. It is a step backward so remarkable as to call for sharp comment by the residents of the State.

The beach birds reach us from the south about the first of May, and, after tarrying for a short time, the most of them pass on northward, though a few species remain and breed with us. For these species there is thus no protection. All during the breeding season gunners may roam abroad, shooting the birds on their nests, and incidentally shooting any other bird that may present itself to view. The foreign gunner, joying in his half holiday on Saturday and the whole one of Sunday, and absolutely ignorant of our laws, delights to spend his time in the country with a gun and to kill everything that wears feathers; and when, as is sometimes done, the head and feet and feathers of the slaughtered birds are removed, it would take an expert anatomist and osteologist to say to what species it belonged. In this new law the alien gunner of whom we hear so much complaint will find his opportunity to slay at will—a temptation and an opportunity furnished him by the State.

New Jersey has long enjoyed the bad eminence of being one of the few States which still permits the summer shooting of woodcock. The present law is on a par with that one, and, as the New Jersey statutes now read, the birds of the snipe family have very little protection. English snipe may be shot during March and April and in the autumn, bay snipe from May 1 to the end of December, and woodcock in July and in the autumn. The wild fowl are little better off; they may be shot from the 1st of September to the 30th of April, while ruffed grouse, quail, English pheasants, prairie chicken and wild turkey may be shot from the 10th day of November to the 31st day of December, except on game preserves, where the shooting may begin on the 1st day of October.

The New Jersey Legislature cannot be congratulated on its game protective work for the season of 1903-4.

POWER BOATING.

IT IS now pretty generally known that the objectionable clauses incorporated in the Grosvenor bill relating to the pleasure power boat have been stricken out, and so the owners of motor craft will not be interfered with this year by any legislation. While we are very glad the Grosvenor bill did not become effective in so far as it related to the pleasure boat, we regret that there do not exist the effective laws needed to regulate the handling of power craft. Incompetent persons will attempt to sail yachts and handle boats, and often with disastrous results. All yacht sailors should be surrounded with every possible protection for the safety of all concerned. We fear that should one or two bad collisions or explosions, accompanied with loss of life, take place within the near future, the power boat would be legislated against in a most drastic fashion. This would be unfortunate and detrimental to the sport, and we should at once have regulations on the order of what was suggested by the American Power Boat Association not long since.

There are other matters, however, which may prove a menace to the sport; the demand for small power boats the past year has been unprecedented, and in some cases the builders have been unable to fill orders. If these boats were of good design and proper construction, we would welcome their appearance, but in many instances the desirable features that make up wholesome craft are lacking. However, just so long as the purchaser is satisfied with these shoddy craft, overloaded with their vulgar brass and nickel rails and gaudy cushions, the builder will turn them out. Until the consumer demands something better the builder has no incentive to produce a real boat. The builder does not pose as a public benefactor and he has no intention of educating the buying public to higher standards. A large percentage of men who have taken up power boating are not yachtsmen, and are not familiar with yachts, nor qualified to pass upon the requirements of boats of any kind. They take up the sport because they believe it will afford some excitement and amusement. Speed is the one thing they have in mind, and instead of going to one of our reputable designers they put themselves in the hands of some builder who constructs a boat from either a model or a crude drawing of his own. This builder does not know what constitutes a combination of lightness and strength as does the scientific designer, nor does he realize what strains such a boat has to meet. The result is, the powerful engines rack the boat to such an extent that it is next to impossible to keep her from leaking. One season will be sufficient to demonstrate how useless are many of the craft now being built; they will prove themselves not only unseaworthy, but slow, owing mainly to faulty design.

THE SPORTSMAN TOURIST

Trails of the Pathfinders.

VI.—Alexander Mackenzie.

Across the Continent.

ON October 10, 1792, Alexander Mackenzie left Fort Chipewyan to proceed up Peace River, his purpose being to go up the stream so far as the season would permit, and, wintering wherever he must, to cross the mountains at its head, and continue westward, if possible, to the Pacific Ocean.

Peace River takes its name from the settlement of their differences at Peace Point by the Knisteneaux and Beaver Indians. "When this country was formerly invaded by the Knisteneaux they found the Beaver Indians inhabitating the land about the Portage La Loche; and the adjoining tribes were those whom they called Slaves. They drove both these tribes before them; when the latter proceeded down the river from the Lake of the Hills, in consequence of which that part of it obtained the name of the Slave River. The former proceeded up the river, and when the Knisteneaux made peace with them, this place was settled to be the boundary."

As they proceeded the weather was so cold and raw as to make travel unpleasant, but on the afternoon of October 17 they reached the falls, where there were two considerable portages, and where they found recent fires, showing that the canoes that Mackenzie had dispatched some days before were not far ahead.

On the 19th they reached what is termed the Old Establishment, an early fort, and found that the people preceding them had slept there the previous night, and had carelessly set the large house on fire. But for Mackenzie's arrival all the buildings would have been destroyed. On either side of Peace River here were extensive plains, which offered pasture to great herds of buffalo.

The next morning they reached the fort, and were received with shouts of rejoicing and volleys from the guns, by the Indians, who now expected rum and a carouse. About three hundred Indians belonged here who, though apparently Chipewyan by race, had adopted the manners and customs of their former enemies, the Crees. The contrast between the neat and decent appearance of the men and the very disagreeable looks of the women as striking. After staying here only long enough to give some advice and presents to the Indians and his instructions to Mr. Findlay, he kept on up the river. It was constantly growing colder and the ice gave some trouble, but on November 1 he reached the place where he expected to winter.

Two men had been sent forward in the spring to cut and square timber for the erection of a house, and about seventy Indians had joined them. The men had worked well, and prepared timber enough for a considerable fort, as well as a ditch in which to set up the palisades of a stockade. Experience at the Old Establishment had shown that many vegetables would grow well in this soil and climate, but this was no time to think about gardening. What was more important was the fact that the plains on either side of the river abounded in buffalo, elk, wolves, foxes and bears, while a ridge of highlands or mountains to the westward was inhabited by great numbers of deer, being called Deer Mountain.

As with all traders, Mackenzie's first business was to call the Indians together and give them some rum, tobacco and advice. They listened to the advice, drank the rum and smoked the tobacco, promising everything that he asked.

On the 22d of November—although the sidehead giving the date in the printed volume says December—the river froze up, so that the hunters had a bridge on which to cross. Game was plenty, yet, but for this means of crossing the stream they might have suffered from lack of food. It was here that the practice of medicine was forced on Mackenzie. By means of simple remedies and by close personal attention to each case he cured a number of severe ailments among the Indians.

Of one of these he says: "On my arrival here last fall, I found that one of the young Indians had lost the use of his right hand by the bursting of a gun, and that his thumb had been maimed in such a manner as to hang only by a small strip of flesh. Indeed, when he was brought to me his wound was in such an offensive state and emitted such a putrid smell that it required all the resolution I possessed to examine it. His friends had done everything in their power to relieve him; but as it consisted only in singing about him and blowing upon his hand, the wound, as may be well imagined, had got into the deplorable state in which I found it. I was rather alarmed at the difficulty of the case, but as the young man's life was in a state of hazard, I was determined to risk my surgical reputation, and accordingly took him under my care. I immediately formed a poultice of bark, stripped from the roots of the spruce fir, which I applied to the wound, having first washed it with the juice of the bark. This proved a very painful dressing. In a few days, however, the wound was clean and the proud flesh around it destroyed. I wished very much in this state of the business to have separated the thumb from the hand, which I well knew must be effected before the cure could be performed, but he would not consent to that operation till, by the application of vitriol, the flesh by which the thumb was suspended was shrivelled almost to a thread. When I had succeeded in this object I perceived that the wound was closing rather faster than I had desired. The salve I applied on the occasion was made of the Canadian balsam, wax, and tallow dropped from a burning candle into water. In short, I was so successful that about Christmas my patient engaged in an hunting party, and brougt me the tongue of an elk; nor was he finally ungrateful. When he left me I received the warmest acknowledgments, both from himself and the relations with whom he departed, for my care of him. I certainly did not spare my time or attention on the occasion, as I regularly dressed the wound three times a day during the course of a month."

Just before Christmas Mackenzie moved from his tent into his house, and now began the erection of houses for the men. Long before this the thermometer had been down far below zero, yet the men had been lying out in the cold and snow without any shelter except an open shed. "It would be considered by the inhabitants of a milder climate as a great evil to be exposed to the weather at this rigorous season of the year, but these people are inured to it, and it is necessary to describe in some measure the hardships which they undergo without a murmur, in order to convey a general notion of them.

"The men who were now with me left this place in the beginning of last May and went to the Rainy Lake in canoes, laden with packs of fur, which, from the immense length of the voyage and other occurring circumstances, is a most severe trial of patience and perseverance; there they do not remain a sufficient time for ordinary repose, when they take a load of goods in exchange, and proceed on their return, in a great measure, day and night. They had been arrived near two months, and all that time had been continually engaged in very toilsome labor, with nothing more than a common shed to protect them from the frost and snow. Such is the life which these people lead, and is continued with unremitting exertion till their strength is lost in premature old age."

Mackenzie was now receiving plenty of beaver from the Indians. But, on the other hand, he was not without the usual annoyances to which the fur trader was exposed. The Indians had a tendency to quarrel among themselves, especially over their gambling at the platter game, which is a sort of throwing of dice, the same, apparently, with the seed game, so common among all the Indians of the plains. On the whole, however, the winter passed quietly, and geese were seen on the 13th of March.

In closing his account of this winter, passed high up on Peace River, Mackenzie gives some account of the Beaver and Rock Mountain Indians living there, who, he says, did not exceed 150 men capable of bearing arms. As late as 1766, when the first traders from Canada arrived on the banks of the Peace River, the natives employed bows and snares, but since then they had become well armed, bows were little used and snares were unknown. These Indians were excellent hunters and such hard workers in the field that they were extremely lean, being always in the best of training. When a relation died the men blackened the face, cut off their hair and gashed their arms with knives and arrows. The women often cut off a finger at the death of a favorite son, husband or father. The Indians told of a time when no timber grew on the hills and plains along Peace River, but they were covered with moss, and the reindeer was the only animal. As the timber spread on them, elk and buffalo made their appearance, and the reindeer retired to the range of highlands called Deer Mountain.

The month of April passed, and early in May Mackenzie loaded six canoes with the furs and provisions he had purchased, and despatched them to Fort Chipewyan. He, however, retained six of the men, who agreed to accompany him up Peace River on his western voyage of discovery, and left his winter interpreter and another person in charge of the fort, to supply the natives with their ammunition during the summer. On the 9th day of May he embarked in a canoe twenty-five feet long, loaded with about 3,000 pounds of provisions, gifts for presents, arms, ammunition and baggage and ten persons, two of whom were hunters and interpreters.

The first day's journey was through an interesting and beautiful country. "From the place which we quitted this morning the west side of the river displayed a succession of the most beautiful scenery I had ever beheld. The ground rises at intervals to a considerable height, and stretching inwards to a considerable distance; at every interval or pause in the rise there is a very gently ascending space or lawn, which is alternate with abrupt precipices to the summit of the whole, or, at least, as far as the eye could distinguish. This magnificent theatre of nature has all the decorations which the trees and animals of the country can afford it; groves of poplars in every shape vary the scene, and their intervals are enlivened with vast herds of elks and buffaloes, the former choosing the steeps and uplands, and the latter preferring the plains. At this time the buffaloes were attended with their young ones, who were frisking about them; and it appeared that the elks would soon exhibit the same enlivening circumstance. The whole country displayed an exuberant verdure; the trees that bear a blossom were advancing fast to that delightful appearance, and the velvet rind of their branches reflecting the oblique rays of a rising or setting sun, added a splendid gaiety to the scene, which no expressions of mine are qualified to describe. The east side of the river consists of a range high land covered with the white spruce and the soft birch, while the banks abound with the alder and the willow. The water continued to rise, and the current being proportionately strong, we made a greater use of setting poles than paddles."

On the following days camps of Beaver Indians were seen, and Mackenzie was somewhat anxious lest they should encourage his hunters to desert, but this did not take place. Game continued abundant, and on the 13th they saw along the river tracks of large bears, some of which were nine inches wide. "We saw one of their dens, or winter quarters, called watee, in an island, which was ten feet deep, five feet high and six feet wide, but we had not yet seen one of those animals. The Indians entertain great apprehension of this kind of bear which is called the grisly bear, and they never venture to attack it but in a party of at least three or four."

The land on both sides of the river was high and irregular, and the banks and the rocky cliffs exhibited strata of red, green and yellow colors. "Some parts, indeed, offer a beautiful scenery, in some degrees similar to that which we passed on the second day of our voyage, and equally enlivened with the elk and the buffalo, who were feeding in great numbers and unmolested by the hunter." The next day they passed a river, of the mouth of which Mackenzie says: "This spot would be an excellent situation for a fort or factory, as there is plenty of wood and every reason to believe that the country abounds in beaver. As for the other animals, they are in evident abundance, as in every direction the elk and the buffalo are seen in possession of the hills and the plains." Two elks were killed and a buffalo wounded that day. The land above their camp spread out in an extensive plain, gradually rising to a high ridge, chiefly grassy, and dotted with poplar and white birch trees. "The country is so crowded with animals as to have the appearance, in some places, of a stall-yard, from the state of the ground and the quantity of dung which is scattered over it. The soil is black and light. We this day saw two grisly and hideous bears."

Although the ascent of the river had not been easy and they had frequently been obliged to unload and repair their canoe, it was not until Sunday, the 19th, that they met rapids and cascades, which presented greater difficulties. The canoe was heavily laden, the current enormously swift, and broken constantly by rocks and shoals, the only means of advance was by the tow line, and the beach was often narrow or wanting. At the beginning of this very difficult stretch of water they found several islands of solid rock with but little soil upon them, the rock worn away near the water's surface, but unworn higher up, so that the islands presented, as it were, so many large tables, each of which was supported by a pedestal of a more circumscribed projection. On these islands geese were breeding.

Carrying over short distances, often crossing the river in a very swift water, in constant danger from the great stones which frequently fell from the banks above, and much of the time in the water, they pursued their way for a short distance over this very difficult passage. The work was terribly hard, and as far as they could see up the river there was no improvement of the channel. Therefore, Mackenzie sent out a party of six men to explore, and on their return that same night they reported that it was necessary to make a long carry—nine miles they said—before smooth water would be met with. The canoe was therefore unloaded, the baggage carried up to the top of the bank above the river, and then the canoe was fairly hauled up to the same height. There they camped. In two days' march from this place, carrying the load and the canoe, they again met quiet water.

The journal for Thursday, the 23d, enumerates the different sorts of trees which they saw, among which is named bois-picant, a tree which Mackenzie had not seen before, but which was apparently the west coast shrub—the devil's club, which grows in a few places on the eastern slope of the Continental Divide. Although he did not know it, Mackenzie was now quite close to the summit of the Rocky Mountains.

The river here was wide, flowing in great volume, and very swiftly but smooth. There were many ani-

mals in the country, for their tracks were seen everywhere; and when Mackenzie left a bundle of presents on a pole, as a good-will offering to any natives who might pass by, one of his Indians added to the bundle a small, round piece of green wood, chewed at one end to form a brush, such as the Indians use to pick out the marrow from bones. This was the sign of a country with many animals in it. At a number of points along the river they had found places where wood had been chopped with axes, showing that the Indians who had passed along here had had intercourse with the whites.

They were now flanked on both sides by high mountains covered with snow, and the cold was so severe that the men, although working hard, could not get along without their blanket coats. On the last day of May the men were so cold that they landed in order to kindle a fire.

Their great labor, so long continued, had made Mackenzie's people more or less discontented. They were tired of the journey and anxious to get back. Moreover, some wanted to go in one direction and some in another, and the forking of the river gave rise to open grumbling. However, Mackenzie handled them well, and they went on. On the 1st of June he says: "In no part of the Northwest did I see so much beaver-work within an equal distance as in the course of this day. In some places they had cut down several acres of large poplars; and we saw also a great number of these active and sagacious animals. The time which these wonderful creatures allot for their labors, whether in erecting their curious habitations or providing food, is the whole of the interval between the setting and the rising sun."

Ever since they had started the water in the river had been rising, since, of course, the advancing summer was melting the snows in the neighboring mountains and swelling all the streams. On the 5th of June Mackenzie left the canoe and ascending a high hill or mountain crossed the country, and climbing a tree looked ahead. He saw little that was interesting, and on returning to the river could see nothing of the canoe. Made anxious by this, he went forward to see if it was ahead, sending others of his people back to look for it. He had no food, and was preparing to lie out during the night when a shot from Mr. Mackay and the Indian who had been sent back announced that the canoe had been discovered. His people excused their slow progress by saying that their canoe had been damaged and that the travel had been harder than on any previous day, and Mackenzie pretended to believe them. The difficulties of the way were now very great. The current was so strong that paddles could not be used, so deep that the poles were useless, while the bank of the river was so lined with willows and other trees that it was impossible to pass the line. The water was still rising and the current growing stronger. In spite of all these impediments they pushed on, and were already beginning to look for the carrying place, where they should cross the mountains to the stream which ran toward the Pacific.

On Sunday, June 9, they noticed a smell of fire, and in a short time heard people in the timber, as if in a state of confusion. The Indians were frightened by the discovery of the explorer's party, and the explorer's party were not a little alarmed for fear they should be attacked. Very judiciously Mackenzie turned his canoe off to the opposite side of the river, and before they were half way across two men appeared on the rising ground opposite them, brandishing their spears, displaying bows and arrows and shouting. The interpreter called to the Indians, telling them that the white people were friendly, yet the Indians preserved a threatening attitude, but after some talk consented to the landing of the party, though evidently very much frightened. They laid aside their weapons, and when Mackenzie stepped forward and shook hands with each of them, one of them, trembling with fear, drew his knife from his sleeve and offered it to Mackenzie as as a mark of submission.

These Indians had heard of white men before, but had never seen any, and were extremely curious as well as suspicious. They had but just reached here and had not yet made their camp, but on the discovery of Mackenzie's party, had run away, leaving their property behind.

The explorer made a great effort to conciliate and to attach them to him, and during the day the whole party of Indians came in, three men, three women and seven or eight boys and girls. They were delighted with the beads which were given them, and seemed to enjoy the pemmican, their own provision consisting entirely of dried fish. They possessed some iron, which they said they obtained from people distant about eleven days' march, and that those people traveled for a month to reach the country of other tribes, who lived in houses and who extended their journeys to the Stinking Lake, or the ocean, where they traded with white people, who came in boats as large as islands.

This account discouraged Mackenzie, who feared that the end of his journey was far distant. However, he continued his efforts to lull the suspicions of the Indians, and treated them and their children with especial kindness. The next day, sitting about the fire and listening to the talk of the Indians and interpreters, some portion of which he could understand, he recognized that one of the Indians spoke of a great river flowing near the source of the one which they were ascending, and of portages leading to a small river, which discharged itself into the great river; and a little patient work led the Indian to describe what seemed a practicable route toward the ocean.

These Indians were of low stature, not exceeding five feet six or seven inches, lean, round-faced, with pierced noses and loose hanging hair. They wore robes of the skins of the beaver, the ground hog or the reindeer, dressed with the hair on. Their leggings and moccasins were of dressed moose, elk or reindeer skin. The men wore collars of grizzly bear claws. Their cedar bows were six feet in length, and bore a short iron spike on one end, and so might be used as a spear or lance. They also carried lances, headed with iron or bone. Their knives and axes were of iron. They made lines of rawhide, which were fine and strong, while their nets and fishing lines were of willow bark and nettles. Their hooks were of bone set in wood, their kettles of basketry, their spoons of horn or wood. Their canoes were made of spruce bark. Among certain presents given Mackenzie before he parted from these people were a net made of nettles and "A white horn in the shape of a spoon, which resembles the horn of the buffalo of the Coppermine River"—by which undoubtedly is meant the muskox, "but their description of the animal to which it belonged does not answer to that." This horn was probably that of a mountain sheep.

With a guide engaged from these people Mackenzie pushed on, promising the Indians that he would return in two months. The journey up the river was difficult, and the canoe by this time was in bad shape, so that a little jar caused it to leak, and repairs were frequent. At length they left the main stream, by the instruction of the guide, who declared that it began only a short distance away, having its origin in a great valley which was full of snow, the melting of which supplied the river. The branch which they went was only about ten yards broad and the one they entered still narrower. The current was slow, and the channel so crooked that it was sometimes difficult to work the canoe. Soon they entered a small lake choked with driftwood, and camped at an old Indian camp. Beaver were abundant here, as were swans and geese, but they killed none of them, for fear of alarming any natives by the discharge of firearms. This Mackenzie regarded as the highest source of the Peace River.

At the head of the lake they found a carry where there was a beaten path, about 800 yards long, to another small lake. From here two streams were seen tumbling down the rocks from the right and emptying into the lake that they had left, while two others, falling from the opposite side, poured into the lake they were approaching. Now they had crossed the Continental Divide, and instead of fighting with the current they would be going down the stream. We may imagine something of what Mackenzie's feelings must have been when he had surmounted the Divide and saw before him a direct passage to the western ocean. But his troubles were by no means over.

From the lake they passed into a small river, full of wood which had slipped down the mountain side, and which constantly obstructed the way. At first there was scarcely water enough to float the canoe, but the water grew deeper, and toward evening they entered another lake. Its outlet was very swift, and they had difficulty in keeping the canoe from being driven against the trees which had fallen across it.

Men sent ahead down the river to report on its practicability came back with terrible stories of rapids, fallen trees and large stones. The guide was now very uncomfortable, and wished to return, but this, of course, was not permitted.

After carrying around the nearest obstacles they pushed off again, but the force of the current was so great as to drive the canoe sideways down the river again and break her. Mackenzie and the men jumped overboard, but before they could straighten her course or stop her they came to deeper water, and were obliged to re-embark, one man being left behind in the river. Almost immediately they drove against a rock, which shattered the stern of the canoe, and now the vessel darted to the other side of the river and the bow was smashed as well as the stern. The foreman tried to check her by holding to branches of a tree, but was pulled out of the canoe and ashore. A moment later she struck rocks, which broke several large holes in the bottom, and in a moment everyone was overboard tyring to hold up the wreck. The strength of the current, however, forced them down the stream several hundred yards, but at last the vessel was guided into shallow water, and an eddy, and there stopped and dragged to shore. In a short time the man that they had left behind joined them, and they were now able to see what their condition was. They had lost some of their baggage and the whole of their stock of balls, but they still had some lead in the form of shot, from which bullets might be made. The men were frightened and anxious to get back, but a liberal dose of rum with a hearty meal and some encouraging words from their leader quieted their fears, and made them willing to go on. Men were sent off to look for bark with which to repair the canoe and also to look for the main river, which their guide told them was not far distant. These men came back with unsatisfactory reports, declaring that the river they were following was quite impracticable, while they had not been able to see the other larger river.

The next day the canoe having, been repaired, was lightened and a part of the men took her slowly down the river, while the remainder carried the baggage along the shore. It was evident that this stream could not be followed much further, and again exploring parties were sent out to see if the great river could not be found. They saw it, but declared that to reach it would be very difficult. That night Mackenzie, as usual, sat up to watch the guide, so that he should not desert, but Mr. Mackay, who relieved him, permitted the man to slip away, and he was not seen again. The river that they were descending became more and more swift and rough and was, in fact, wholly impracticable. It was now determined to cut a way for the canoe across a neck of the land, and at eight o'clock that night they had the inexpressible satisfaction of finding themselves "on the bank of a navigable river on the western side of the first great range of mountains."

Rain the next morning postponed their start until eight o'clock, when they were on the water and, driven by a strong current, which, though it carried them along swiftly, was perfectly safe, since the river seemed deep. The stream was constantly joined by other rivers, and after a time it broadened out and the current became slow, so that they proceeded with more deliberation. An Indian cabin of recent construction was seen on the shore, and toward night a smoke on the bank indicated natives.

GEORGE BIRD GRINNELL.

[TO BE CONTINUED.]

Fly-Fishing for the Fair.

From Recollections of Sport with a Companion.

THE best rod for a lady is a split-bamboo of the best quality, nine feet long, weighing four and a half to five ounces; a small click reel, holding 30 yards of fine enamelled waterproof line, six foot leaders or casting lines of silk worm gut, a good assortment of flies, selected with reference to the water to be fished, and a dozen snelled bait hooks of medium size. In stream fishing, the great difficulty has been due to the necessity of wading the stream, if the best sport is to be secured. A short, light skirt can be worn over waders, but after the spring sun has warmed the water, it is quite unnecessary to carry cumbrous waterproof wading gear. One of my girl friends wore stout shoes with hob-nails, heavy woolen stockings, with leggings, short skirt, jacket with roomy pockets, etc. If you are wise select a stiff, light hat that can be depended upon to stay where it is put.

Lake fishing is very delightful, but girls with sporting blood in their veins enjoy far more the independence and freedom found in wading and fishing one of our big mountain streams, where the scene is constantly changing and every variety of water is found; the long, deep, placid pool, flecked with foam, with heavy rapid pouring in at the upper end; the stretches of quick water and rifts of greater or less depth, and the potholes among the big rocks, where the stream is a running torrent. A girl, not greatly above the average in health and strength, has begun a day dedicated to sport by breakfasting at 6 o'clock in the morning; then a tramp of four miles over the trail to reach a good and wild part of the river, where it has not been over-fished. On entering the water it feels a trifle cold, but this passes off quickly, and she has fished two miles up the stream without thinking of a chill; in fact, without thought of anything except the beautiful surroundings and trout, nearly a dozen of which lie in her creel. She would never think of lunch if we did not remind her of it. Then indeed she finds her appetite, and keenly enjoys the sandwiches while resting luxuriously upon a bed of warm sand. She is quite ready to begin again, and we retrace our steps, picking up a trout here and there, and talking of the chances of getting a real big one in the great pool far down the river, which we have decided upon for the late evening cast.

The sun sinks behind the hills, great shadows stretch across the narrow valley; yet the light is still too strong on the favorite pool. Oh, we must wait a little longer. Now the sun has gone, the shadows deepen and the trout are rising here and there in a business like manner. She has taken a good fish, another, and another. Oh, just one more! The last trout is in the basket and we creep through the bushes looking for the trail. It is almost dark, but instinctively we know that the path is underfoot. We tramp onward in Indian file, and for a time chat brightly of the day's sport; but it grows very dark under the trees, and all our attention is concentrated on the trail. Finally, we reach the wood road, where we can walk side by side; the underbrush and forest are close on either hand. Suddenly there is a crash—close, very close. She grasps my arm for a moment, then laughs. What is it? We do not know. It may have been a timid bear, a lynx, or a stupid porcupine. We think that a belated squirrel, a rabbit or a long-eared wood mouse could never have made so much noise. We like to imagine that it was some savage beast, though we know that there are none here. She is not afraid. Afraid? Puff! No, indeed. Shall we take the short cut? It will save nearly half an hour; but she will have to wade the stream where it is wide and deep, in the darkness. No matter; she is afraid of nothing now. We pass through a belt of pine (since sold for a large sum and fed to a hungry saw mill—pine is very valuable nowadays), then through fields and brush to the water. It looks black and sullen, but she takes my arm, and in we go. Soon we are over, and refreshed and dripping, seek the well-worn path.

A few minutes' walk and the lights of the hotel shine before us. We enter, and in a moment are surrounded by an eager crowd. How very cool and clean these people are. The cry is: "What luck? What luck? How many trout have you caught?" A great dish is brought forth and the fish are heaped upon it. Twenty-nine. "Good! You have had fine sport for the month of August." "What time is it?" "Eight o'clock. Are you tired? Going to bed soon?" "No, indeed; I am going to the dance; but we will have supper first."

She comes down in a few minutes transformed, radiantly bright. She feels no fatigue now. In fact, will not realize how tired she is until she goes to bed. It is a healthy tired, and no ill results. Not even when on one occasion, in her eagerness to hook a rising trout, she wades too deep, loses her footing and is submerged. No one ever caught cold when catching trout. This is true; but one must not allow the blood to stagnate by lying about. The exercise and excitement make the circulation excellent, and the sport makes for health only. Many of our women and girls love all that pertains to fly-fishing, and there is no reason why they should not enjoy it just as their fathers and brothers do.

I intend to tell about the girl and the six-pounder, but my notes are already too lengthy.

THEODORE GORDON.

Mrs. Simple Newleywed—"I want you to send around a gallon of midnight oil."

Grocer—"Midnight oil? Never heard of it."

Mrs. Simple Newleywed—"Why, I'm sure that's the kind my husband's mother said he always burned."—Brooklyn Life.

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Natural History.

Pine Grosbeaks as Pets.

EAST MONTPELIER, Vt., March 28.—*Editor Forest and Stream.*—I have been interested reading the accounts in FOREST AND STREAM, by your many correspondents of the ways of feeding the starving birds this cold, hard winter. One of the coldest days a bird flew, or dropped, into our yard, and could not rise again. We picked it up, took it into the house and put it in a moderately warm room. In a short time it regained strength enough to stand. We put it into a cage, thinking to release it as soon as the weather would permit. The next day and the next were still cold and windy. In the meantime, we began to get interested in our find. By the third day she was so tame she would light on our hand and eat seeds without the least signs of fear. We thought perhaps, it might be an escaped cage bird. This thought banished all idea of giving her her liberty in the continued cold weather.

She soon was a great pet in the family, and we began to cast about to learn, if possible, to what variety she belonged. In my inquiry I heard of a flock that answered to her description in an orchard eating frozen apples in a neighboring town.

I looked them up and found them the same as our bird, the males being red.

I tried to trap a male for two days without success. Left my trap with a friend and the next day got a telephone dispatch that he had one. We have them now in a large cage about four feet long. The male bird by the third day was as tame as the female. So we think they are natural pets. Now, I come to what I started in to ask without this long preamble: I will give description as to color, etc., asking you or some of your correspondents to give the variety to which they belong: In color the male is brick or blood red on top of head, shading lighter down the neck and breast to legs; also some red at base of tail; wings and tail brown, with white edgings on secondaries of wings, flights nearly or quite solid brown. Female is a soft shade of color, much like a maltese cat. Has a slight tinge of bronze on head, and on cushion at base of tail. They have the short, strong beak for shucking seeds. For food they are fond of apples and most all seeds, particularly so of sunflower seeds. They are about the size of robin redbreast, perhaps a bit smaller. The male has a low whistle, which he keeps going most of the time. When cleaning their cage we can hardly keep them off our hands, they are so tame. Altogether, they are enjoyable, handsome pets.

GEO. DAVIS.

[The birds are pine grosbeaks (*Pinicola enucleator canadensis*), a northern species of the old and new worlds, found in temperate climes only in winter, easily tamed and making most attractive pets. In the winter of 1903-4 pine grosbeaks appeared on Long Island, where they are very seldom seen, and a number were captured with a landing net and kept alive.]

As bearing on this subject, we reproduce parts of two contributions printed more than twenty years ago in the FOREST AND STREAM, one from the pen of our old correspondent, Shadow, and the other from B. Horsford, both writers well known for the interest of their observations and the charm of their writings, to an older generation of FOREST AND STREAM readers. Shadow says:

"Yesterday I saw three of these beautiful birds industriously picking up their dinner in a patch of weeds. They were quite tame and I drove within twenty feet of them, and paused a while to observe and admire them, as they are old friends of mine. Four years ago they were quite plenty in this vicinity, and a large flock of them came regularly every morning to feast upon some frozen apples that hung on a tree within ten feet of my window. They were very tame, and sang so sweetly that I determined to capture some of them if possible. Fixing a slipnoose upon the end of a fishpole I succeeded in roping in a pair of them; the male was a young one, and the female I judged to be two or three years old. There was an old male in the flock, gorgeous with his beautiful scarlet plumage, that I tried very hard to capture; but he was too wary for me. I got the noose over his head several times, but he would twist out of it with scarcely an effort, and never move from his perch nor cease his cheerful song. He always appeared glad to see me, and to be quite interested in my experiments; he would nod and wink at me in the most knowing manner in the world, but in spite of my best efforts, he preserved his liberty, and after a few days I saw him no more.

"The pair that I had captured I placed in a large breeding cage that was about three feet square. They did not appear to be at all alarmed, but took kindly to their new home and at once commenced eating, and in less than an hour they were twittering and singing, happy and contented. For many weeks they appeared to thoroughly enjoy themselves, and became so tame that when I let them out in the room they would fearlessly alight upon my head or shoulder and feed from my hand. I never saw such beautiful feathered pets; they kept almost a constant song from an early dawn until everyone in the house had retired for the night. Their song was not loud, but very sweet and musical."

Mr. Horsford wrote somewhat later of this species:

"I well remember the first I ever saw. It was north of latitude 45 degrees, in Maine, in the winter of '35-6. Coming home to dinner one day, in a blizzard such as is known only in that climate, I could not reach the door on account of snow-drifts. I went back to the woodshed, from which flew out five birds I had never before seen. One dropped a moment in the snow on the roof a few feet from me, and then all disappeared, uttering a soft, sweet note, to avoid separation in the blinding storm.

"Twenty years I looked in vain for that bird, whose form, color, and strange habits had been stamped on my brain. At length, in mid-winter, in Springfield, Mass., I recognized my birds of the storm. They were feeding on seeds of the ash, and I shot a pair with more satisfaction than I ever felt under similar circumstances. Six years afterward the birds again appeared in Springfield, a flock of a dozen or so feeding on the berries of the mountain ash, seeds of black ash, and buds of Norway spruce. Observing their quiet, unsuspicious habits, I captured with noose and fishing rod five, three males. Placing them in a large cage, I sat down to make their intimate acquaintance. They had evidently come from a region where men are not known, and consequently were ignorant of human treachery and human invention. It mattered little to them that they were in confinement; like the little redpoll, they would drop in a clump on the bottom of the cage, uttering, while eating, sweetest notes of recognition ever uttered by a bird. Then the leader's note would be heard, plain as a human voice, 'Come, come, let us go,' then, like the redpoll they would all start at the same instant in the same direction. Reaching the side of the cage, they would cling for a moment to the wires, and then fall back to the perches, sitting for a few minutes silent and dejected, then running to feed and pick about the cage. This was often repeated the first day, but soon abandoned entirely.

"In a few days my birds began to warble a song of soft notes, louder and more constant. As spring advanced the song resembled somewhat that of the purple finch, but with long, sweeping notes which that bird does not utter. I used to sit hours by the cage, for I never possessed pets I so much loved. They would eat from my hand, pick and apple seed from my lips, interspersing the same sweet music.

My birds delighted to wash, a luxury denied them in their native region. I filled their bathing vessels with snow and water, in which they would wallow until completely drenched, eating snow and ice while so doing. Sitting by the cage one Sunday afternoon, the sun shining brightly, I had placed in it a ball of snow; the birds were sitting on the ball, spreading wings and feathers over it with every token of delight. Suddenly with a scream every bird showed the most intense excitement, not terror, but fight all over, heads in one direction depressed, wings slightly spread, topknot overhanging the beak, and the beak wide open. Turning my head there was a shrike hanging to the sash not a foot away. The robber bird darted off and my pets became quiet. The shrike had discovered the birds from a tree opposite the window, and the birds recognized their mortal enemy at sight, showing no inclination to retreat. My inference was that the shrike dared not encounter the old birds, a single nip of whose powerful beak would cut off the neck of the shrike in an instant.

"Wishing another test of their sagacity, I brought to the cage some stuffed birds. They approached them fearlessly, recognizing their own kind, but the instant a stuffed shrike appeared there was the same scream, the same position of desperate resistance repeated.

"One of my birds, consigned to friends in New York, lived six years in a cage, suffering lately from those shelly excrescences mentioned by Dr. Coues. My own lived about the same number of years, and at last died of plethora from over kindness. Of their southern breeding limits little is known. Finding them in summer on Moosilank, midway in New Hampshire, and having most positive evidence that they come down from the spruce belt on the Green Mountains to feed on currants and cherries in the back settlements of Vermont, I do not hesitate to presume that they may be found much further south than represented to be the case. One fact at least favors this opinion, the bird is almost an annual visitor to us, and has already arrived this first of November, the snow-bunting having come a few weeks sooner, both preceding the cold weather as never before."

Pearl Fisheries of Ceylon.

THE most famous and best known pearl fisheries of the world are those of Ceylon, and from the earliest times pearls in great numbers and of great value have been taken from its waters. The divers descend to a depth of six or eight fathoms, forty or fifty times a day, aided in sinking by a stone fastened to a rope long enough to reach the bottom and carrying a basket or bag in which the pearl oysters are placed as collected. The greatest depth to which these divers descend is about thirteen fathoms.

The Ceylon pearl fisheries are now under the control of the British Government. A remarkable feature about them has always been their uncertainty and intermittent character. For fifty years, during the nineteenth century, the banks produced nothing, and from 1837 to 1854, and again from 1864 to 1873, no pearls were collected.

In view of the immense importance and value of these fisheries, an effort was recently made by the Colonial officers of the British Government to investigate the causes of these barren years, and also to find a remedy for them; and Prof. W. A. Herdman was asked to examine the records on this subject and to report on them. Following his report came a request by the government that he should make a personal investigation of the pearl banks, and with Mr. Hornell, an assistant, he went to Ceylon and set about the work.

The first step in the investigation was to make a complete survey of the whole sea bottom of the area of the pearl fisheries. This was done partly by sounding and dredging, and partly by the aid of divers, Mr. Hornell himself doing some investigating in a diving suit. Thus was gained much information as to the nature of the ground best suited to the growth of the pearl oyster and of the dangers to which the animal is exposed. It has many active enemies, such as sponges and molluscs and star fishes, which bore through the shell; fishes and internal parasites. Yet, on the whole, the destruction caused by these agents is slight, compared with that caused by shifting sands, which overwhelm whole beds of oysters, burying and killing them. A bed of oysters, examined in March, which extended over an area of sixteen square miles, was covered by a vast multitude of young oysters "so closely packed that the bank must have held not less than one hundred thousand million." In November of the same year the spot was revisited and the oysters had disappeared, having been buried in the sand or swept down a steep slope outside the bed.

Overcrowding is another fruitful cause of destruction which Prof. Herdman suggests may be avoided by transplanting. That the star fishes cause much damage is shown by an example given of a crop of oysters estimated in March, 1902, as five and three-quarter millions, which had nearly disappeared by March, 1903, from this cause.

Along with the study of the oyster and the oyster beds, were carried on investigations in a number of collateral subjects. Much light is thrown on the formation of pearls, and the investigators found that only in very rare cases is the nucleus of the pearl a grain of sand. Boring sponges and burrowing worms lead to the formation of pearls or pearly excrescences on the inside of the shell by the irritation which they cause. The largest and best pearls are those which occur in the mantle "or in the thick white lateral part of the stomach and liver, or even secondarily free in a cavity of the body." These are caused by the secretion of concentric layers of nacre about the dead body of a parasite, and such pearls attain their greatest size in oysters from three and a half to five years of age.

The work of this commission will be continued and Mr. Hornell will continue his observations as marine biologist at the Galle Laboratory, where he will undoubtedly do much for the pearl, sponge, trepang and other marine fisheries of Ceylon.

Accompanying this report are many descriptions of new forms of life, and it has a great scientific as well as commercial value.

Michigan Ornithological Club.

THE second annual meeting of the Michigan Ornithological Club was held at Ann Arbor, Mich., April 2, in connection with the Michigan Academy of Science.

In the absence of Pres. A. B. Covert, Mr. T. J. Butler presided. The business meeting of the club was held during the morning session. The election of officers resulted as follows: President, Prof. Walter B. Barrows, Agricultural College; First Vice-President, A. H. Griffith of the Museum of Art, Detroit; Secretary, Bradshaw H. Swales, Detroit; Treasurer and Business Manager, Chas. E. Wisner, Detroit; Editor-in-Chief of Bulletin, Alex. W. Blain, Jr., Detroit; Associates, Prof. W. B. Barrows, Lansing; J. Claire Wood, Detroit.

A large attendance was present at the afternoon session, held in the lecture room of the University of Michigan Museum. Mr. Wilfred Brotherton read a paper, "Random Notes on the Bald Eagle in Oakland County, Michigan," in which his experience with the bird were set forth. Mr. Norman A. Wood gave a very interesting paper entitled, "Notes on the Avi-Fauna of Oscoda County, Michigan." A complete list of the species observed during a trip down the An Sable River in the summer of 1903 was given with interesting notes. It was in this region that the first nests, eggs and young of Kirtland's warbler were discovered by Mr. Wood in July of the same year.

Dr. Van Fossen, of Ypsilanti, presented a paper on the "Winter Birds Observed Around Ypsilanti." A list of the species found was given with full notes.

Mr. Charles C. Adams, curator of the University Museum, spoke on the "Geographical Distribution of Kirtland's Warbler," and illustrated by the use of maps the migration route of this species, as known by the captured specimens.

Mr. Alex. W. Blain, Jr., spoke on "The Future for Ornithological Work in Michigan," followed by remarks by Prof. H. L. Clark of Olivet College. Mr. Clark stated that extensive field work is especially needed to map out and understand the distribution of the birds of the State.

Mr. T. J. Butler spoke at length on the formation of a chapter of the Audubon Society in Michigan, and of its needs and aims. Mr. Butler is the secretary of the Michigan chapter and can be addressed at Detroit, Home Savings Bank Building.

Papers entitled "Bird Immigration," by J. Claire Wood; "Nesting of the Barred Owl in Michigan," by E. Arnold, and "The Birds of Michigan," by Prof. Barrows, were read. Considerable interest was shown in the meeting, and the club enters on its second year under favorable aspects. Over one hundred members are enrolled. All bird students and bird lovers of the Great Lake region are requested to write to the secretary, at 46 West Larned street, Detroit.

BRADSHAW H. SWALES, Sec'y.

DETROIT, April 18.

What Bird is This?

AT THIS season of the year—that is to say, early spring—as one strolls through the country, his ear is apt to be saluted with the cry of a bird which is almost like the sound of a clappers in a cornfield. It will begin clap, clap, clap, or clack, clack, clack (and this is a closer representation of it), and keep up uninterruptedly for a minute or so and then cease. Though very different from the cry of the cuckoo (being, in fact, quite devoid of music, withal possessing a fine resonant note of spring), it is analogous to it in this, that it nearly always seems to come from a distance and has, for that reason, a certain air of mystery about it. A dozen times have I gone in search of the utterer of the cry, only to find when I got to the place wherever it seemed to have proceeded, that it was being uttered far off in a different direction. Once, however, I was fortunate enough to get a view of the mysterious migrant. It was only a brief one, but sufficient to show me a rather large bird, about twice the size of a thrush, and of gray plumage in general. Will FOREST AND STREAM kindly identify it for me?

F. M.

NEW YORK, April.

Breeding Turtles and Tortoises.

UNITED STATES CONSUL CANADA writes from Vera Cruz, Mexico: A laguna known as the Paso de Colombia, and situated on the northerly end of the island of Cozumel, off the east coast of Yucatan, has recently been rented from the Mexican Government by one Señor Valerio Rivero with the intention of utilizing the waters as a breeding place for the common turtle, as well as for the tortoise variety. The lessee pays to the customs authorities at Chetumel the sum of $100 annually for the privilege, the lease to run for ten years.

Northern Birds in Italy.

PROF. HENRY H. GIGLIOLO, of the Royal Zoological Museum, Florence, Italy reports the occurrence last winter—1902-3—in central Italy of the great white-billed diver (*Colymbus adamsi*), two of which were captured; a female on Lake Montepulciano December 2, 1902, and a male on the 19th of the same month on Lake Trasimeno.

This winter there has been an invasion of northern Italy by the Bohemian waxwing (*Ampelis garrulus* L), which appeared in great numbers in December and January. It is reported from Nice that more than 200 specimens, said to have come from Corsica, have been sold in the market.

The yellow-billed loon, described by Gray in 1859, is an inhabitant of Arctic America, west of Hudson Bay, and is given as a casual visitor to northern Europe and Asia. Its occurrence in Italy is, of course, very extraordinary. A good figure of it is given in "The New and Heretofore Unfigured Species of the Birds of North America," by Daniel Giraud Elliott, two volumes, New York, 1866-1869, plate 63.

Some Birds of the South.

IN THE proceedings of the Biological Society of Washington, last November, Mr. E. W. Nelson, the naturalist, whose investigations have covered so much territory north and south, describes a number of new forms of birds from southern Mexico. Among these are a new quail dove, long-toed grouse, owl, woodpecker, two jays, several warblers and a bluebird.

In the November Condor he has an interesting illustrated article on the Mexican cormorant, which he found breeding at Lake Chapala about Christmas time, 1902. Most of the nests were just completed, and as yet contained no eggs, but quite a number had a single egg, and in a number of cases two eggs were found. A series of eighteen eggs were taken. A later inspection of the colony, January 5, 1903, showed it to be deserted, presumably as a result of the earlier visit.

In the proceedings of the Biological Society, just issued—March 10, 1904—Mr. Nelson prints an important paper of about twenty pages entitled: "A Revision of the North American Mainland Species of Myiarchus."

This group, which appears to reach its greatest development in the American tropics, including the West Indies, is known in the north only by the species *cinerascens*, which extend up the west coast to Oregon, and *crinitus*, which is found in eastern America as far north as southern Canada and New Brunswick. These birds, it is remembered, very commonly employ the shed skins of snakes as nest building material.

After some introductory matter, Mr. Nelson gives a key to the species and sub-species, which number about twenty, and subsequently describes each. The paper is largely technical, but of great interest and value.

GAME BAG AND GUN

Lost in the Woods.—VIII.

A Lost Hunter.

(*Continued from page 315.*)

ONE morning just after there had been a fresh fall of about one inch of snow three of us started to make the Echo Lake drive. The Old Trapper and the Colonel were to take the stands, while I, with our spaniel Sport, was to make the drive. The others scattered, but Henry had arranged to go for the mail. Those of us who were hunting got one buck, which fell to the Colonel. We hung him up about three miles from camp, and over four hours after the Colonel fired his shot. The deer was weighed ten days after he was hung up, and the scales recorded 198 pounds. We were pretty well tired out by the time we reached camp, and had no desire to hunt the remainder of the day, but spent most of the time in visiting with some Indians hunting near by.

At dusk, Henry, who had gone for the mail, had not returned, and the worry which we felt developed into genuine alarm when at nine o'clock he had not returned. We had fired guns and "hollered" at intervals without result, and so the Old Trapper and myself lighted lanterns, and taking one gun started to look him up. It did not seem possible for him to have gone astray, as the woods were full of logging roads and he had the Pembine Creek and the railroad to take a compass line to in case of being lost, and by following a trail along the former he could walk right into camp. We went over the route we thought he would take to the logging camp, shooting our gun and yelling, but no answer did we receive. To one who has never had such an experience let me say it is not a pleasant situation. At such times, if he has not known it before, a person will find that he is possessed of a very vivid imagination. It seems as if there is nothing that will not be thought of. All kinds of accidents are pictured in the mind. The lost one may have shot himself. He may have been shot by some other careless hunter. His gun in the act of firing may have exploded. He may have fallen and broken an arm or a leg. A tree may have crashed down and killed him. A limb or part of a tree top may have broken off and felled him with a fatal blow. He may have fallen into a lake or be mired in some swamp. Or he may be wandering miles away, traveling as only a frantic man can when he is lost. So it is no pleasant situation to have a member of your party lost and it was in no pleasant frame of mind therefore that we hunted for our man.

After beating around the roads and choppings for quite a time we finally reached the logging camp. The cook, when awakened, said that Henry had been there and had started back to camp late in the afternoon. This was somewhat of a puzzler, and we were at a loss to know just what to do when we heard a young fellow calling to us as he stuck his head out of the door of the main shanty. "Say," says he, "are you fellows looking for that hunter?" We allowed that we were, and were very much relieved when he responded with: "Well, he's in here sound asleep." Come to find out he had started for camp and when not far from the logging shanty had shot at and supposed he had wounded a deer. It was so dark he thought he would go back and stay all night so as to be near the place in the morning, and ready good and early to look for his deer, but he never thought about our being alarmed. It was three o'clock in the morning when the Old Trapper and myself, completely beat out, crawled into our bunks.

We had a somewhat similar experience one year when hunting on the Pine River, but not with a member of our own party. Two of us, while up river and about a mile or so away from it, heard a great deal of shouting over in that direction, and finally worked over that way. We were walking along a logging road that led directly to the river when out of the brush on one side of the road burst a hunter on the run. He was a sight to behold. His clothing was all torn, his face and hands bleeding from scratches, his hat lost and his whole person bedaubed with the black from the half burned logs he had been crawling over. When he saw us he sank to the ground completely exhausted, saying: "My God! how glad I am to see you." When he revived sufficiently to talk we found that he belonged to a party that was camped about two miles further up stream and right on the banks of the river. He had been running around an area not over a half a mile square all the morning trying to find the river, and there it was so close that by standing still the sound of the water as it rushed over some rocky rapids could be plainly heard. Once on the river bank all he had to do was to follow a well-beaten logger's trail right to his camp. The poor fellow, however, had become almost crazed, and when we led him to the river he could not for the life of him tell whether his camp was located up or down stream. We finally took him to it, and when we left he vowed that no power on earth could ever get him into the woods again.

He was simply "rattled" so completely that he could not seem to get any idea of direction from looking at the sun, and he had no use he said for his compass because he didn't know whether to go east, west, north or south in order to reach the river. He had become so excited that he would run through the woods until exhausted, and generally he would wind up at the place from which he started.

This seems to be the general experience of men lost in the woods. Instead of keeping cool and following their compass, or, if without one, a direction from the sun, they imagine the compass is wrong, they get an idea that camp is located in just such a direction, and the more they travel the worse they become, until finally they reach a half-crazed condition. It would seem as if a man with a compass could work out of any part of Wisconsin now that it is so gridironed with railroads and so completely laid open by the work of the lumbermen, and yet only last fall a well-known physician while hunting was lost, and it was only after snow disappeared that his remains were found only a few miles from the place from which he started, and from all appearances he had wandered around until he died from exhaustion and exposure.

It is a bewildering thing to get lost in the wild woods and start out two or three times from a given point, in an effort to find your bearings, only to wind up at the same starting point. It is discouraging, and one can at once see how it would put the mind of an inexperienced person in a whirl. The main thing, however, is to keep cool. The first tendency, if a compass is at hand, is to doubt it. Don't do it. Stick to the compass, no matter how much it may seem to deviate, and it will always be found to be correct.

There is an old story current about an Indian who went out to hunt and carried a compass with him for the first time. When ready to return to camp he followed the compass, only to find that he was lost. He looked at the compass and said to himself, "Compass lost, Indian lost." Then he placed the compass on a log and with a stick shattered it with one blow, and as he did so ejaculating: "Compass go to ——, Indian find himself," and he did.

This may be all right for the Indian, but it won't do for the white man unless he is an experienced woodsman. A man who, when in the woods keeps his head, can take a compass line and by sticking to it can land himself among familiar landmarks. The next thing is not to be in too much of a hurry. Don't tire yourself out, but carefully husband your strength. Guard against emergencies by always seeing to it that you have some matches and a small lunch in your pockets before you start out. You may have to lie out all night, and if you do when darkness overtakes, stop, build a fire and stay by it until daylight. Don't shoot all of your ammunition away at once. If you are with a party you should have a signal for help. For instance, three shots fired as quickly as possible might mean that you wanted some one to come to you. If you gave the signal and it was not answered then wait a little while before repeating it.

When going into a new country to hunt we have always taken the direction of the water courses and the general trend of the ridges, so that when without a compass on a cloudy day knowledge of these things helps us out when in a strange place. Any wind storms that have passed through a country have usually come from one general direction, and by noting this and the way that the timber lies, information that may be of value can often be obtained. The runways of the deer generally cross the country in a well defined direction, and by observation of this a man can still further fortify himself. Our own experience in this phase of life in the woods has not been extensive, but we have frequently known of parties hunting near us whose members have suffered severely. In one instance one man laid out one night and had his feet so badly frozen that he was crippled for life.

CAROLUS.

In a New England Park.

Editor Forest and Stream:

The winter of 1903-4 will long be remembered in New England for the extreme and continued cold that prevailed, which, with the numerous storms, caused the destruction of many game birds, nearly exterminated the Bob White, and even many of the ruffed grouse, which are supposed to be able to survive the most severe weather, were unable so to do. It has been the general impression that the grouse's habit of budding would prevent individuals of this kind from suffering from want of food, but an examination of a number of these grouse that have been found dead has shown empty crops, although apple and poplar trees, the buds of which they are said to be particularly fond of were within easy reach.

We have in Springfield, within a mile and a half of the business center, 465 acres of land belonging to the city, called the Forest Park, which has not been developed in quite so artificial a manner as has been the case with many such places in other towns. Within its limits regularly breed the woodcock, Bob White and ruffed grouse, and wood duck have several years nested there. A flock of fifty or more semi-domesticated wild geese roam at their will around the park, some of which each season pair and raise their young. For a number of years ring-necked pheasants have there been raised in confinement, and every spring many of these have been let loose, some of which have remained and made their home in the park. Last winter it was noticed that these pheasants were standing the hard weather much better than the other game birds and that they did not seem to want for food. Ten years or more ago there was planted in one section of the park a half acre or more of barberries (*Berberis vulgaris*). These have grown to be shrubs three or four feet in height, with long spreading branches, which, during the colder months, are heavily laden with scarlet berries. It was observed that the pheasants were feeding upon this fruit, and during the winter eat many bushels of these berries. Following a fall of snow the conditions among the barberry bushes were similar to a barnyard in the country after a storm of this kind, where the snow had been trampeled down by domestic fowls, so numerous were the foot prints of the pheasants. I mention these facts, thinking they might interest persons who are engaged in raising these birds, for this kind of barberry is easily cultivated and will not only furnish pheasants with plenty of food during the colder months, but the shrubs will give them shelter against inclement weather and their living enemies.

The presence of representatives of any of these species of birds that I have mentioned, in a public park, where they are protected in fact, as well as by law, makes a very attractive addition to what is usually found in such places. The honking of a goose, the drumming of a ruffed grouse, the whistle of a Bob White, the glimpse of a pheasant skulking in the high grass, or of a woodcock skimming over a group of alders, are sounds and sights that give pleasure to many.

ROBERT O. MORRIS.

Do Bears Destroy Game?

JACKSON, Wyo., March 30.—*Editor Forest and Stream.*—Do bears kill game? I have been in a country for twenty years where there are plenty of bears, black, brown or silver tips. I have hunted them a great deal, having killed, and been the cause of killing, too in that time, and I have yet to find the first instance where a bear has killed a game animal of any kind, yet they like meat and no matter how well fed they are they will go a long ways out of their way to feed upon the carcass of any game animal killed by a hunter, and this has been the undoing of a great many bears. The hunter, by taking advantage of this weak point and setting a steel trap properly, is almost sure to get bruin, as after he has once found a carcass he will invariably return to it time and time again. It is true bears will sometimes prey upon domestic stock. In fact, I once saw, while traveling with a pack outfit upon a wagon road just after a heavy rain, where a large grizzly bear had been upon the road. His long claws had sunk deep in the moist earth, and upon investigating and following the bear's track a short distance I came to where there had been a struggle and something had been dragged away. I followed the trail for about a mile, and there at the foot of the mountain I came upon a three-year-old cow that the bear had killed and dragged away.

I think that such cases are rare, and I consider the bear one of our best game animals, and I am glad that in place of Wyoming paying a bounty upon each bear killed they are now protected for ten months of the year upon all timber reservations of the State, and I trust the time is not far distant when they will be afforded the same protection as all other game animals. I agree with Mr. Long that nearly all the stories about the bear are not written from personal observation, and believe his reputation for doing harm is greatly exaggerated. Bears are very sly, and in some cases might be able to conceal the fact that they do harm to game of any kind; but, as I said, in all my experience in hunting them, I have yet to see a single instance where I thought they had harmed any game animal; yet in this same time I have been where mountain lions, wolves, coyotes and other animals had killed hundreds of game animals.

A bear's food seems to be nearly entirely vegetable; they eat grass, weeds and roots, nuts and insects. They seem to take special delight in digging out squirrels and mice, not to get the animals, but to rob their cache of nuts or grass roots.

We are told that bears den up fat and come out in the spring poor; now the fattest bears I ever saw was in the spring, just after they came out of their dens, which, in this country, is usually in May. Their first food seems to be the young grass, just starting, but if they can get at some carcass containing fairly good meat they don't seem to care for anything else. A short time after they come out all their fat disappears. Their food up to the berry season is grass, weeds and roots, with some ants, grasshoppers and grubs as a relish; then berries and last nuts. A bear knows where every old carcass in the country is, and if you track him he will take you to one after the other, even after they are all consumed, but if he finds a good fresh carcass in dark heavy woods, he will often lay by it for days, and in some cases he will bury it completely. He holes up in November, high up in heavy timber, usually where the snow will lie till June.

S. N. LEEK.

Wild Ducks and Marsh Lands.

FORT ATKINSON, Wis., April 1.—Editor *Forest and Stream:* It has come to be generally recognized that the scarcity of wild ducks in this region, where formerly there were many thousands, is due to the draining of marshes that formerly afforded them protection and feed.

There has been no general slaughter of ducks, like that of buffalo, and the introduction of smokeless powder and repeating shotguns has simply made the birds more wary, and when driven from the large lakes in this vicinity, if there are no pools or wet marshes in which they can pass the night they fly to Lake Michigan and often forget to come back.

If shotguns could be made that would shoot fine shot at all distances, from four rods to a mile, and make a 30-inch pattern at all ranges, there would be danger of wiping out the ducks, but none of us will ever see that day. However, while the ducks can not be wiped out by improving the firearms under present restrictions for hunting, they can most assuredly be driven out by draining the marshes, and this, in time, will produce the effect feared—their extinction.

The wisdom of the State in preserving wild ducks may be somewhat from poetic reasons, illustrated in the love of even non-hunters, to see these beautiful birds of passage flying northward in spring to their mysterious homes and southward again in the fall, but the main reason is to promote the sport of hunting, because a close acquaintance with the woods and fields is needed by thousands of the State's hardest workers, in order to keep them in good health.

This class is very large and takes in every man who owns or borrows a shotgun, while back of these is a large sympathetic class that would join in the sport if it could. These two classes, which include many of our foremost citizens, resent the growing tendency to drain every marsh in the State, though such draining may add a few dollars to the farm receipts for the year. Every extensive marsh drained not only encroaches upon sports afield but is a hindrance to the conservation of the water supply of the country to an extent that had been estimated at more than the cutting off of double that acreage of heavy forest.

This last is a reason that appeals at once to every citizen, sportsman or not.

One of the reasons that have caused government forest reserves to be made, has been to afford an opportunity to the poor man to enjoy the sport of hunting, which, in time, without this, would be narrowed down to the rich in protected reserves.

It is time that a general movement was made toward setting apart worthless marsh lands as game preserves.

When drained they are always subject to ruin by disastrous floods, and in a single wet season all that has been spent on them may be brought to naught. As government game preserves, they would be a source of perennial enjoyment to even the poorest citizen of our land.

For years past there has been a growing feeling that wild ducks would soon become extinct. A few were seen here in the spring and fall, and only a few. The old time flight was gone. Large marshes hereabouts were dry and the streams low, on account of lack of spring freshets and heavy fall rains. The rainfall remained the same, but, owing to open winters, there was no accumulation of snow and ice to flood the marshes in April.

This year all was changed. Heavy fall rains flooded the marshes. Heavy snow and twenty-four inches of ice covered land and water up to the middle of March. Floods not seen since 1881 have made room for millions of wild ducks, and the ducks are here. They are feeding on submerged cornfields, turnips and other vegetation. Old hunters at Lake Koshkonong report that the air is full of ducks and that it "is just like old times." Thousands of acres of "State lands" are nothing but swamps and marshes that would be worth ten times as much to the State withdrawn from sale and kept as game preserves as they can ever bring if sold under the hammer.

H. L. HOARD.

A Pipe Full.

Editor ***Forest and Stream:***

Perhaps one of the greatest pleasures incidental to the pursuit of game is that derived from a close observation of the wild creatures themselves in their haunts. It is, I think, a pleasure more real than the actual killing of the game, though truly that part of it is, to most of us at least, a source of keen enjoyment.

No one who has ever killed game will gainsay the delicious thrill of satisfaction and self-applause that follows the careful stalk and the successful shot. The picture of the buck lurching to fall as venison—your vension, the cleanly killed quail falling like a plummet, the sudden wilting of the gaily plumaged drake or black-necked Canada goose, remains fixed in our memory, to be recalled and enjoyed again and again, long afterwards.

For, whether we have to thank a whilom savage ancestry or the fact of our being carnivores, there remains in most of us enough of blood-lust to desire to slay in season game for the sake of the game itself. Even the pleasure that we derive from studying our friends of fur and feather is not wholly free from a desire to kill. For, apart from those desiccated specimens of humanity whose sole purpose in studying anything animate is to catalogue it according to order, family genus and species, and juggle with its Latin name—is it not anticipation that makes it pleasurable to watch the wild fowl, for instance, sporting about the marshes? Anticipation of what—why, doubtless, the shoot we will have on the morrow, or the next week, or next season.

These rather rambling and incoherent remarks are the substance of a thought brought to mind a short while ago when the writer was whiling away an afternoon in the delightful occupation of tinkering with decoys and boats and other paraphernalia, and preparing for a shoot on the morrow.

I was hidden in some tules running out into the lake and forming a point on which a stand was located. There had not been a gun fired on the grounds for several days, and the birds were floating around in small rafts here and there, most of them apparently asleep, while the shores were the resting places of thousands of others basking in the warm rays of our midwinter sun. The day was ideal; a brisk breeze from the west hummed through the tules and whipped up miniature waves on the lake, and caused a sleepy lap lap of water against the rushes.

Not more than a gunshot away a flock of ten white-fronted geese floated, occasionally preening their glossy plumage and now and then dipping thirsty bills in the water, and then pointing them straight at the sky, to let the drops trickle down their trim necks. A band of shovelers, swimming along in single file, their gaudy red, white and blue contrasting sharply with the modest gray and drab of the geese, were making voluble comments on the weather, and their great peace and contentment, one occasionally pausing to tread water and flap lazy wings in the breeze. Now and then some swooping hawk would drop down and create consternation among the teal on the shore, causing them to take flight in a series of whirls and evolutions, perfect as one bird, which no hawk could follow. Far down the lake numbers of white dots bobbing about, gleaming in the sunlight, marked a raft of pintails riding in the open water.

It made a satisfying picture, and as I sat there, blowing meditative rings from my pipe, I wondered: Is this what those chaps mean who advocate hunting with a camera, and who preach a doctrine of bloodless sportsmanship? It was truly a beautiful picture—the birds, the background of sunlit, breeze-kissed water, and I was certainly very well content without a gun. But then at that very moment was not anticipation busily at work, weaving pictures from the past of what the morrow might have in store? And still wondering I walked back to the cabin to fill my shell case.

ROBERT ERSKINE ROSS.

CALIFORNIA.

PARIS, Saturday.—Spring fashions for Parisian dogs include many novelties, such as colored cambric night shirts, rubber shoes, thick, fluffy dressing gowns to wear after a bath, straw and felt hats, special wicker sofas, cushioned and bedecked with garlands and ribbons; nail files, ear picks, powder boxes and vaporizers.

At the dogs' dressmakers, in the Palais Royal, I noticed this week a white, hairy cloth overcoat bordered with white mohair galons, a red velvet collar and a pocket for the handkerchief.—New York Herald.

"This race problem is a dreadful thing." "Yes," answered young Mrs. Torkins; "whenever I see Charley get a pencil and begin to figure on the entries in a race, I know there's going to be trouble."—Washington Star.

News from the Illinois.

THE ducks are flying north, blue-winged teal and mallard. But they do not make this State their rendezvous as in former times when blue ponds dotted the landscape and little streams wandered like silver threads through the woof of copper-colored prairie grass.

Along the rivers and lakes the wild orgies of the hardy feathered travelers are still held with all the old-time noise and chatter, but the rivulets have dried away and the ponds have been converted into good corn lands, by the aid of tilling.

Howsomever, the hunter's fret gets into the veins of a few men and boys when the wild duck's cry is heard, and buff hunting coats and brown leggings go slipping away to dredge ditches which take the place of the ponds and streams of other days, for the ducks and geese must still find a few resting places on their way to the Labrador coast.

But the game does not tarry now, as of old, a few days, a week at the most, and these doughty birds of passage have left us until the winter drives them south again.

Twenty years ago it was no uncommon thing to be able to find a dozen nests of wild goose and duck in a five minutes' walk. To-day not one duck will be found nesting in the old haunts.

Of prairie chicken and quail there are scarcely any to be found in the middle portion of the State. What a change man has wrought in a few years; time was when, as a little child, I counted daily, when the weather was cool, or during the winter months, strings of both quail and grouse hanging up on my father's back porch, ready alike to make a meal for friend or stranger. Now one must go far afield for the chickens, and be invited by a farmer to his fields at that.

Yes, the ducks are flying northward, blue-winged teal and mallard, but for sport one must pack his grip and go after them, to Newfoundland and Labrador.

Meanwhile the hunter has nothing left in the way of game, if game it may be called, save the timid rabbit and the noisy sparrow. But the coming youth clings to a gun quite as tenaciously as ever did his father, and now and then kills one of his companions by way of carelessness.

MRS. JAMES EDWIN MORRIS.

Subsistence in the Wilderness.

Editor Forest and Stream:

THE lamented death of Mr. Leonidas Hubbard must cause profound sorrow to all your readers, and the statement that Mr. Hubbard was inadequately equipped and not sufficiently experienced in woodcraft should add to that sorrow. Any information regarding the natural resources to be found in an uninhabited country and the best means of utilizing them must be of very great value to all who undertake such trips, but unless we are in a position to give such information and *do so,* let us refrain from telling the public how much better we could have made the trip and how much we should enjoy doing so.

Let us rather pay an affectionate tribute to the memory of one whose writings were so entertaining, instructive and free from self-glory.

It is the experience of some persons who have traveled in the north country that a gill net is easily transported and will furnish many times its own weight of food for a long period; that fish traps can be made from willows, brush, etc.; that the inner bark of willows, alders, etc., can be twisted into lines and made into nets; but this is a slow and tedious process.

All these facts, and many others, are known to the Indians of the north country, and the fact that one of the party was an Indian would indicate that unusual conditions were encountered which overtaxed their resources.

When animal life is scarce in the north land it is very scarce indeed. In spruce timber a few squirrels can almost always be depended on. Rabbits may be plentiful for a few years and then almost entirely disappear. Caribou are constantly on the move and may be beyond reach. Ptarmigan may be found most unexpectedly when not needed and be conspicuous by their absence in time of want. Blueberries and cranberries are generally abundant, but what an unsatisfying substitute to digestive organs accustomed for generations to more nourishing food.

It would certainly be the part of wisdom for anyone venturing into the "Land of Little Sticks" to take a reasonable supply of light nutritious food and not trust entirely to the resources of the country.

E. FREY BALL.

Trails of the Pathfinders.

MONROE, Neb., March 6.—*Editor Forest and Stream.*—I am much interested in the articles now appearing in FOREST AND STREAM, called "Trails of the Pathfinders," and shall look for the coming of FOREST AND STREAM with unusual pleasure as long as they last.

L. H. NORTH.

WASHINGTON, D. C., March 10.—I am exceedingly glad you are publishing this series of articles on early exploration in North America. The books are so rare, and the privilege of consulting them so restricted, that your publication of the most important matter must be a source of information and delight to a great many people.

C. HART MERRIAM.

KELLER, Wash., March 9.—I am reading your articles on the frontier with great pleasure. Having spent the greater part of my life on the frontier, such articles seem to become a part of my nature.

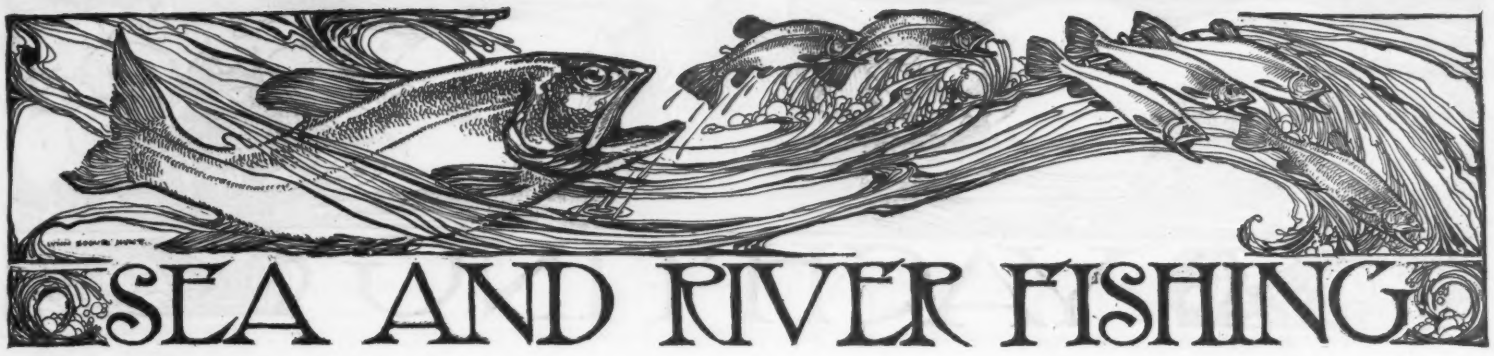
LEW WILMOT.

NEW YORK, March 21.—I take this opportunity to thank you for the pleasure and interest with which I am reading "Tales of the Pathfinders."

L. F. BROWN.

Mr. Plane (who is fond of dogs)—"Miss Waite, don't you think you ought to have an intelligent animal about the house that would protect you and"——

Miss Waite—"Oh, Mr. Plane! This is so sudden."—Philadelphia Press.



Voracious Pike.

CALLING the pike the fresh water shark is a name well applied, for he is bold and anything that comes his way is food for his maw. It is a known fact to those who have studied its habits that he will eat frogs, young ducks, musquash, in fact, anything that happens to be in front of him, not even barring his own offspring. How destructive they are in a trout or whitefish lake is well known.

One of the lakes on which I was stationed years ago was said to have been, formerly, good for whitefish, but was now almost nude of this staple food of the dwellers at the post, brought about by the increasing number of pike.

As I was likely to be in charge, for a few years at least, I set to work to destroy these marauders. The lake is only a mile and a half long by a quarter broad. It discharges into a large river by a shallow creek, but, by this creek, no doubt, many pike were added to the number at each spawning time.

The creek took my attention first, and we staked it from side to side with pickets six feet high and planted them about two inches apart.

At the back or river side of this barrier we kept some old, almost useless, nets set continuously. They were doubled so that no small sized pike could pass. This was done during the low water in August.

My next move was to employ every boy, girl and old woman about the post trolling for pike. We supplied them with the trolls and lines and paid them a cent apiece for every pike over a foot long.

During this trolling process we kept some nets of large mesh, set purposely for the bigger ones. For days and weeks there must have been landed on an average a hundred a day, and yet they came.

As most of the pay was taken out in cheap "bulls-eyes" at a cent apiece the real outlay in money was not considerable.

The following spring we inaugurated another system of warfare against the pests, and that was by paddling quietly around the bays and shooting them while they lay spawning and basking in the sun and shallow water.

Often three or four would be clustered together. A shot would not kill the whole, but it would stun them so we could finish them with the paddle.

One that was killed in this way measured thirty-nine inches long and weighed thirty-five pounds. A fish of this size was good eating, and therefore used at the post.

The small, slimy ones, however, were burned in numbers on a brush heap.

With such persistent and continued onslaught on our part, at the end of the first year their numbers were very noticeably decreased, and at the close of the following summer they were positively scarce, and a very welcome number of whitefish stocked our lake in their place.

I resided at that post for twelve years, and we were never in want of the finest fish for the post's consumption.

Before closing this sketch I must tell one anecdote about a pike, even if I lay myself open to be disbelieved by the reader. I am well aware that fish stories stand in bad repute and the veracity of the narrator doubted. The following is positively true and came under my notice:

Years before the foregoing part of my story happened I was stationed on the height of land north of Lake Superior, and one afternoon portaged my canoe over into a small chain of beaver lakes "hunting for signs."

It was a "still, calm day," as some high-flown writer would put it.

A feather dropped would have fallen straight to the earth.

I was paddling very quietly out into the lake from the portage when I noticed something moving very gently on the surface a few yards ahead of the canoe. Getting closer I made this out to be the fin of some fish moving sluggishly. Pushing the canoe further in advance with noiseless knife strokes of the paddle, I got close enough to see it was a pike with a whitefish half protruding from its mouth and almost dead from suffocation.

This, I thought, is a rare occurrence for a person to witness, and gently reaching out my hand I inserted my thumb and finger into the eye sockets and lifted both into the canoe.

On getting ashore at the next portage I forced open the jaws of the pike, and the whitefish dropped from them. The half that had been inside the pike's mouth was quite decomposed, while the part out in the water was comparatively fresh..

In trying to swallow this fish, which was two-thirds the pike's own length, he had distended his jaws to the utmost, but they only opened enough to reach near the back fin, and here fixing his teeth in savage fury the biter had bitten more than he could eat. He was equally unable to disgorge himself as he was incapable of swallowing, and thus by his greediness he brought on his doom.

Noticing his stomach was in a distended shape caused me to rip it open with my knife, and out tumbled the remains of a smaller whitefish, almost quite digested, which had been swallowed whole and would have measured nearly a foot long.

It was gluttony and not hunger that caused him to reach an untimely end, a moral for greedy little boys.

MARTIN HUNTER.

Tarpon at Tampico.

Editor Forest and Stream:

The season at Tampico, Mexico, has this year been extraordinary, even for this well-known fishing ground, and your readers may be interested in the fortunes of our party of three rods during ten days' fishing in those waters, swarming with tarpon, jackfish and shark, and with myriads of smaller Gulf fish that crowd the entrance to the river and bay.

W., our veteran of five seasons here, who fishes always with the tangible result in view, pronounces the season without parallel in his experience in the number of fish hooked and landed in a given number of days.

Tampico is not ideal, either in its conveniences for living or its equipment for the fisherman. In both of these, in fact, it is decidedly lacking; the hotels are poor and the food far from appetizing, while every item of tackle must be taken with you and all repairs be made by the fisherman himself as best he may. Ruiz, the proprietor of the most available boats, provides skiffs with boatmen at $4 Mexican ($2 American money) per day, with a charge of $2 for the chair, of which you thereupon become the owner.

The tarpon fishing is in the Januco River, abreast of the town, and extends to Tamos, a little village nine miles above. Below, as far as La Barra, "the bar" or entrance from the Gulf, a distance of some eight miles, the jackfish run plentifully, and sharks are to be readily taken from eight to ten feet in length. Our "savalo" or tarpon record covers seven days—Feb. 3 to 10—and shows fifty-eight fish to the three rods, the largest 6 feet 4 inches in length, with a girth of 40 inches; weight (by formula) 154.6 pounds. The others varied in weight from 70 to 125 pounds, and in length from 5 feet 4 inches to 6 feet 8 inches. These fifty-eight tarpon represented approximately a third of our "rises"—that is, of fish actually hooked—and the three rods must have had during the seven days at least 150 tarpon fairly "on." W. and the writer, fishing side by side one morning for perhaps two hours, "rose" nineteen fish during that time. W.'s method, and E.'s and my own for the first few days was to shoot the fish with a revolver after it had been brought in near enough to the boat to lift the head and shoulders out of water; but my own fancy later was to land the fish on the shore, take the hook from its mouth and return it to the water. In most cases I am confident that it survived the operation. The banks of the river are low and muddy, and the landing is far from being a pleasant process, but it gives the tarpon a chance for his life, and is, I think, to be commended in the case of a fish which is practically inedible, and in most cases a sheer waste. The natives will, it is true, accept the gift of a tarpon, but its subsequent use is more than doubtful; it has fertilizing properties, however, and may be so disposed of.

The jackfish, or "purel," is a powerful fighter, but does not leap. He is a tireless puller, however, and it is no easy matter to bring him to gaff. In appearance he is a direct contrast to the tarpon, being comparatively short and deep and of a clear orange color, varied with white and blue. He is said to be excellent eating—certainly the shark finds him a dainty morsel, as we found on opening one of his captors. The jack runs in size from 8 to 30 pounds, our largest of the fifty or more taken weighing 23 pounds.

Four sharks, taken at La Barra, where we passed two days on the fine sand beach, by hand-line from the shore, and three specimens of moonfish, the latter of an exquisite color and shading—a sort of iridescent blue—completed our creel. It was a wonderful experience in what one may call the heavier or more strenuous fishing. As an exhibition of fish power the rush of the tarpon is incomparable, and the first straight leap into the air, head up and silver body quivering in the sunlight, one of the moments of a fisherman's life. The tug of the purel is simply amazing, and the alternation of their powerful struggles with the leaping and lashing of fifteen tarpon, our heaviest day's catch, should be more than satisfactory to the seeker for exciting sport.

Our weather was as nearly perfect as may be. Only one day were we kept ashore by a norther, in the teeth of which the wise fisherman goes not forth. At such times, and in the non-fishing intervals our visit was made more than pleasant by the cordial reception and kind attention of friends, who did everything to make it long and happily remembered.

HENRY G. PICKERING.

BOSTON, April 19.

The Opening Day.

OH, don't get up yet, boys. What time is it? 4:30, eh. Too early. Dark for two hours yet. Why don't you let up and let me sleep a while yet. You are positive pests, and I will even up with you fellows yet.

All awake now and hustling, I can tell you. Where are we going to head for? "The island for me," says George. "I'll try the log jam and the North Passage," breaks in Norman. "Well, the best remaining spot is the long level for me. Shall we meet at the old elm for lunch? We are up none too early after all, boys, and I hurriedly apologize for my growling; but it was tough to be dragged out so. I wonder if Vet will have our breakfast ready, so we won't lose any time? Did he have bait procured for us, so we won't have to wait to get it this morning? We never thought to ask him to do it. Wonder if he could have forgotten it."

"Dear old Vet. Breakfast is ready for us, boys, and so is the bait. Why do we forget that he never forgets? How it does tickle him to see us so crazy and so happy to be here.

"Don't eat so fast, boys; it is unhealthy; and you look so greedy. You are not hungry, eh? Only eating because it is ready and not quite light enough to go yet. Here is Vet again with our lunches all ready. Better come with us, Vet. You only think you are too old and rheumatic. You will forget it all with the first trout. Well, good-by. Much obliged for your trouble. Oh, yes! we'll catch 'em to-day, sure. Just right; not going to be too bright; do you think so, Vet?"

At last we are started, and it seems miles to the river. "It don't seem as if it used to take so long to get there, does it, boys? And how light it is now! It is a shame we are not there now! What time we are wasting! Here's where we part. Well, good luck to you. Don't fail to be at the old elm at noon, boys." I must hustle now, get to work, and not be outdone to-day as usual. I wonder why George always catches the most and the largest? I am sure that the level is the best spot to-day, and I must be careful. It does seem, though, as if I would never get started at it. Oh, at last! The same old spot. Look at that log. That's where George hooked his two-pounder last season, right under that spur projecting over the dark pool and alongside the little eddy. Surely there must be another there now. I am shaking so that I can hardly get ready. What am I thinking of? I am almost in open view, and how can I expect to do business with a trout and so ignore his cunning? Baited at last! Is it possible? No trout there! I would not have believed it. Well, well! Come to think of it, I was too careless. Now for the old root below. I must look out now. There! What a beauty! Another, and another! What a day! Is it possible? Past noon? What will the boys think of me? Too late to go to the old elm now. I will have to eat alone and explain to them to-night. It is too bad; but I never dreamed that it was so late. I won't stop but a minute now to eat my lunch, and then get to fishing again.

The days must be getting shorter instead of longer. Where did my lunch get so thoroughly soaked? It must have been away back there when I slipped in just as I hooked that big fellow. This doughnut is about four times its original size, I should judge.

Off again! Glorious luck—beautiful fish—splendid weather. Oh, oh, can the day be so near over? It can't be possible. Well, I can't stay another minute, if I am to get back to-night. I am a little tired after all. Didn't think it. Yes, this is me, Vet. Have the boys come back yet? What luck did they have? Is it so, Vet? Have they really beaten me again? Fifteen apiece, and George has a 1¾-pounder? I don't care much, Vet. I have had such a day.

100 Sportsmen's Finds.

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MOST fishing stories are supposed to be untrue, or at least greatly exaggerated, and in case the above heading may lead the unsuspecting reader to pass over the paragraph we hasten to say that although it *is* a fishing story, it is also an absolute fact. It appears that some time ago a member of the Ladies' Branch of the Kennel Club, residing in Jersey, sent to a local firm of jewelers four Ladies' Branch shields to be made into menu holders. The jewelers sent them to a firm of manufacturing silversmiths in London, who returned them to Jersey on the 15th of January, per London and South Western Railway. Three weeks ago a fisherman was spearing for eels near the Royal Pier at Jersey, and brought up on his spear a parcel done up in a portion of a trouser leg. On inspection he found enclosed the missing silver shields, which, as the owner's name was inscribed upon them were eventually restored to her.—London Kennel Gazette.

Ocean Cruises and Races by Yachts Enrolled in the New York Yacht Club.

Nos Agimur Tumidis Velis.

A SEARCH among the records of the New York Yacht Club from its foundation in 1844 to the present time, brings to light much interesting data bearing upon this subject.

The following lists cannot fail to attract those who are interested in the sport of yachting, as their perusal will recall almost all the events in our yachting world for the past sixty years.

Some of these dates may not be quite accurate, and any corrections will be most gratefully received by the club.

As early as 1850 a yacht flying the flag rounded Cape Horn, and shortly afterward the flag was carried to English waters and the Baltic by the schooner America, the sloop Sylvie, and the steam yacht North Star.

The America's sailing at Cowes gave great impetus to the sport on both sides of the Atlantic.

North Star, the first steam yacht in the club, made a cruise to the Baltic. The incident of the Wanderer, slaver, although not pleasant to dwell upon, is unique in the history of yachting. In Edith Mr. R. B. Forbes had a vessel peculiarly adapted for shoal water, as when she grounded, the water ballast in the double bottom was pumped out and the yacht floated at once.

In 1862 the famous America came into possession of the Navy Department, and did good work on blockading duty. The schooner yachts Hope and Henrietta also served their country during the Rebellion.

In 1866 Alice, 27 tons, sailed to Cowes, being the smallest yacht up to that time to cross the ocean. This year saw also the sweepstakes race, New York to Cowes, won by Henrietta.

In 1868-70 we find the N. Y. Y. C. represented in English racing by Sappho and Dauntless.

In 1875 occurred the first yacht race for steam yachts. This race was around Long Island, and was won by Ideal.

In 1878 the steam yacht Jeannette was lost in the Arctic on a voyage of discovery.

In 1885 the first circumnavigation of the globe was made by a N. Y. Y. C. yacht—the schooner Brunhilde.

The centerboard schooner Iroquois passed through the blizzard of 1888 that wrecked so many good vessels.

The Utowana was the first auxiliary of the N. Y. Y. C. to cross the ocean. This was in 1891.

In 1897 a flag member of the club, Miss Susan De Forest Day, cruised in her steam yacht Scythian to the West Indies.

The United States Government took over many of the steam yachts of the club during the war with Spain. Among those that did good work was Gloucester.

In 1902 a squadron of thirteen N. Y. Y. C. yachts assembled at Kiel, under command of Rear-Commodore C. L. F. Robinson, N. Y. Y. C. This year also the Utowana, auxiliary, won from four rivals a prize offered by the Royal Yacht Squadron in a race under sail alone.

The steam auxiliary barque America, N. Y. Y. C., made a cruise to the Arctic, 1902, and one in 1903.

In 1893 a squadron of five N. Y. Y. C. yachts were at Kiel under command of Rear-Commodore Cornelius Vanderbilt, N. Y. Y. C.

The earliest ocean race of the club was between the Maria, sloop, and Coquette, schooner, in 1846.

Many of the America's Cup contests and other races under the rules of the club have been sailed off Sandy Hook over ocean courses.

N. B.—The different measurement of the same vessels—tonnage and otherwise—is accounted for by the various changes in the New York Y. C. measurement rules from time to time.

1850——BETTY BLISS—Schooner, Geo. B. Rollins, owner.
Sailed from New York for San Francisco; was reported lost on west coast of South America.

1851——AMERICA—Schooner, 170 tons; Com. J. C. Stevens, owner.
New York to Havre, twenty-one days.

1851——AMERICA—Schooner, 170 tons; Com. J. C. Stevens, owner.
Race around Isle of Wight for Royal Yacht Squadron cup—now America's cup.

1851——AMERICA—Schooner, 170 tons; Com. J. C. Stevens, owner.
TITANIA—Schooner, 100 tons; Robt. Stevenson, owner.
Race from Nab Light Vessel, 20 miles to sea and return. Won by America.

1851——SYLVIE—Sloop, 105 tons; Louis Depau, owner.
New York to Havre, 16 days 12 hours.

1853——SYLVIE—Sloop, 105 tons; Louis Depau, owner, against English cutters, and schooners.
Race 20 miles to windward and return from Nab Light Vessel. Won by Julia, English cutter.

1853——NORTH STAR—Steam yacht, 1,857 tons; Cornelius Van-
Summer. derbilt, owner.
Cruise to Baltic and Mediterranean ports. First steam yacht in the N. Y. Y. C.

1855——SYLVIE—Sloop, 105 tons; H. G. Stebbins, owner.
Summer. Southampton to New York, 34 days. Returned dismasted.

1857-8—WANDERER—Schooner, 238 tons; J. D. Johnson, owner.
Winter. Sailed for a cruise to Havana and New Orleans. Returned to New York.

1858——WANDERER—Schooner, 238 tons; W. C. Corrie, owner.
July. Sailed from Charleston for Trinidad and St. Helena. She returned to Brunswick, Ga., a slaver, November, 1858. At the meeting of the N. Y. Y. C., Feb. 3, 1859, W. C. Corrie was expelled from the club, and the Wanderer's name erased from the club list.

1858——HAZE—Schooner, 87 tons; W. H. McVicker, owner.
Sum- SYLVIE—Schooner, 105 tons; W. A. Stebbins, owner.
mer. FAVORITE—Schooner, 128 tons; A. C. Kingsland, owner.
WIDGEON—Schooner, 101 tons; Wm. Edgar, owner.
UNDINE—Sloop, 44 tons; L. W. Jerome, owner.
REBECCA—Sloop, 77 tons; J. G. Bennett, Jr., owner.
MADGE—Sloop, 99 tons; R. F. Loper, owner.
UNA—Sloop, 67 tons; W. B. Duncan, owner.
MINNIE—Sloop, 59 tons; S. W. Thomas, owner.
First ocean sweepstakes around Long Island, about 250 miles. Won by Sylvie and Minnie.

1858——EDITH—Centerboard schooner, 46.6 tons (built of iron,
Nov. with water ballast in a double bottom); R. B. Forbes, owner.
Provincetown to Rio de la Plata in 42 days. Mr. Forbes cruised in the tributaries of the Rio de la Plata in this yacht.

1861——HENRIETTA—Schooner, 158 tons; J. G. Bennett, Jr., owner.
Loaned to U. S. Government and taken into the U. S. Revenue Marine under command of Lieut. J. G. Bennett, Jr., U. S. R. M. Attached to U. S. South Atlantic Blockading Squadron.

1862——AMERICA—Schooner, 170 tons.
Captured by U. S. Navy in the St. Johns River, Fla., and attached to the South Atlantic Blockading Squadron; stationed off Charleston, S. C., and other ports. Sailed in America's Cup race of 1870, finishing fourth in order and on time allowance (15 starters), under command of Vice-Admiral David D. Porter, U. S. N. Borne on the books of the Navy Department until 1873.

1862——HOPE—Schooner, 123 tons; T. P. Ives, owner.
Sold to the United States Government; attached to South Atlantic Blockading Squadron, U. S. Navy.

1865——FLEETWING—Schooner, 206 tons; Geo. A. Osgood, owner.
HENRIETTA—Schooner, 220 tons; J. G. Bennett, Jr., owner.
Ocean match from Sandy Hook Lightship to Cape May Lightship and return, 212 miles. Won by Fleetwing.

1865——HENRIETTA—Schooner, 220 tons; J. G. Bennett, Jr., owner.

Octo- PALMER—Schooner, 194 tons; R. F. Loper, owner.
ber. Ocean match from Sandy Hook Point to and around Cape May Lightship and return, 220 miles. Won by Henrietta.

1866——VESTA—Schooner, 201 tons; Pierre Lorillard, owner.
HENRIETTA—Schooner, 220 tons; J. G. Bennett, Jr., owner.
Ocean match from Sandy Hook Lightship to and around Cape May Lightship and return, 212 miles. Won by Vesta.

1866——ALICE—Sloop, 27 tons; T. G. Appleton, owner.
July 12. Sailed from Boston to Cowes, I. W., Capt. Arthur H. Clark, N. Y. Y. C., in command.

1866——HENRIETTA—Schooner, 220 tons; J. G. Bennett, Jr.,
Dec. owner.
FLEETWING—Schooner, 206 tons; Geo. A. Osgood, owner.
VESTA—Schooner, 201 tons; Pierre Lorillard, Jr., owner.
Ocean match, Sandy Hook Lightship to the Needles, I. W., England, under N. Y. Y. C. rules. Won by Henrietta.

1867——ALICE—Sloop, 27 tons; T. G. Appleton, owner.
Cowes to Boston.

1867——VESTA—Schooner, 201 tons; Pierre Lorillard, Jr., owner.
Cowes to New York, 34 days.

1867——HENRIETTA—Schooner, 205 tons; J. G. Bennett, Jr., owner.
Cowes to New York, 36 days.

1867——FLEETWING—Schooner, 206 tons; Geo. A. Osgood, owner.
Cowes to New Bedford, 42 days.

1868——SAPPHO—Schooner, 274 tons; E. A. Lawrence, owner.
New York to Cowes, 14 days.

1868——ALINE—Schooner, 212 tons; R. Sutton, owner.
CAMBRIA—Schooner, 188 tons; James Ashbury, owner.
SAPPHO—Schooner, 310 tons; Capt. Baldwin (N. Y. Y. C.), owner.
International yacht race around the Isle of Wight, England. Won by Cambria.

1868——SAPPHO—Schooner, 274 tons; E. A. Lawrence, owner.
Cowes to New York, 32 days.

1869——EVA—Schooner, 81 tons; Louis L. Lorillard, owner.
Feb.-Apr. To Havana and return. Winter cruise.

1869——SAPPHO—Schooner, 310 tons; W. P. Douglas, owner.
New York to Queenstown, 12 days 9 hours 6 minutes. Record crossing.

1869——DAUNTLESS—Schooner, 268 tons; J. G. Bennett, owner.
New York to Queenstown, 12 days, 17 hours 6 minutes.

1869——METEOR—Schooner, 206 tons; Geo. L. Lorillard, owner.
New York to Cowes. Lost on Cape Bon, Africa, 1869.

1870——SAPPHO—Schooner, 310 tons; W. P. Douglas, owner.
Cowes to New York, 31 days.

1870——SAPPHO—Schooner, 310 tons; W. P. Douglas, owner.
May 10. CAMBRIA—Schooner, 188 tons; James Ashbury (Royal Harwich Y. C.), owner.
International match, first race, 60 miles to sea and return to starting mark off Isle of Wight. Won by Sappho.

1870——SAPPHO—Schooner, 310 tons; W. P. Douglas, owner.
May 14. CAMBRIA—Schooner, 188 tons; James Ashbury (R. H. Y. C.), owner.
International match, second race: Nab Light Vessel to and around Cherbourg Breakwater, 66 miles, and return. Sappho, sailover.

1870——CAMBRIA—Schooner, 188 tons; James Ashbury (R. H.
May 17. Y. C.), owner.
SAPPHO—Schooner, 310 tons; W. P. Douglas, owner.
International match, third race: Nab Light Vessel, 60 miles triangle. Won by Sappho.

1870——CAMBRIA—Schooner, 188 tons; James Ashbury (R. H.
Summer. Y. C.), owner.
DAUNTLESS—Schooner, 268 tons; J. G. Bennett, Jr. owner.
International match from Daunt's Rock, Ireland, to Sandy Hook Lightship. Won by Cambria.

1871——DAUNTLESS—Schooner, 268 tons; Com. J. G. Bennett,
Summer. Jr., owner.
SAPPHO—Schooner, 274 tons; Vice-Com. W. P. Douglas, owner.
WANDERER—Schooner; Louis L. Lorillard, owner.
Match race on cruise with N. Y. Y. C. Squadron to Cape May. From Sandy Hook to Cape May Lightship. Won by Wanderer.

1871——ENCHANTRESS—Schooner, 253 tons; Geo. L. Lorillard, owner.
New York to Gibraltar.

1871——ENCHANTRESS—Schooner, 253 tons; Geo. L. Lorillard, owner.
Cowes to Newport, 34 days.

1872——RESOLUTE—Schooner, 13,755 cubical contents; A. S.
June 24. Hatch, owner.
TIDAL WAVE—Schooner, 8,880 cubical contents; Wm. Voorhis owner.
MADELEINE—Schooner, 8,544 cubical contents; J. Voorhis, Jr., owner.
FOAM—Schooner, 6,404 cubical contents; S. Homans, owner.
MAGIC—Schooner, 4,519 cubical contents; Franklin Osgood, owner.
PEERLESS—Schooner, 2,732 cubical contents; J. R. Maxwell, owner.
Wallack cup, over an ocean course. Won by Madeleine.

1872——MADELEINE—Schooner, 175 tons; Jacob Voorhis, Jr.,
July 25. owner.
RAMBLER—Schooner, 240 tons; J. M. Forbes, owner.
Match for Brenton's Reef challenge cup; Sandy Hook Light Vessel to and around Brenton's Reef Light Vessel, off Newport, and return, about 300 miles. Won by Rambler.

1872——RAMBLER—Schooner, 240 tons; J. M. Forbes, owner.
Sept. MADELEINE—Schooner, 175 tons; Jacob Voorhis, Jr.,
19 owner.
Match for Brenton's Reef challenge cup. Course, from Brenton's Reef to and around Sandy Hook Light Vessel; about 300 miles. Won by Rambler.

1872——DREADNAUGHT—Schooner, 240 tons; A. B. Stockwell,
Oct. 10. owner.
PALMER—Schooner, 194 tons; R. Stuyvesant, owner.
Cape May challenge cup: Sandy Hook Light Vessel to and around Five-Fathom Bank Light Vessel and return, about 212 miles. Won by Dreadnaught.

1872——SAPPHO—Schooner, 310 tons; W. P. Douglas, owner.
New York to Cowes, 18 days.

1872——DAUNTLESS—Schooner, 268 tons; J. G. Bennett, owner.
New York to Cowes, 25 days.

1872——DAUNTLESS—Schooner, 268 tons; J. G. Bennett, owner.
Cowes to New York, 25 days.

1873——ENCHANTRESS—Schooner, 253 tons; J. F. Loubat, owner.
New York to Cowes, 23 days.

1873—ENCHANTRESS—Schooner, 276 tons; J. F. Loubat, owner.
Oct. 9. ALARM—Schooner, 225 tons; A. C. Kingsland, owner.
CLIO—Schooner, 67 tons; T. B. Asten, owner.
EVA—Schooner, 77 tons; E. Bird Grubb, owner.
ATALANTA—Schooner, 145 tons; Wm. Astor, owner.
DREADNAUGHT—Schooner, 240 tons; A. B. Stockwell, owner.
WIDGEON NO. 10—Schooner, 105 tons; N. Y. Pilot.
HOPE NO. 1—Schooner, 132 tons; N. Y. Pilot.
EDMUND BLUNT NO. 2—Schooner, 120 tons; N. Y. Pilot.
C. H. MARSHALL NO. 3—Schooner, 85 tons; N. Y. Pilot.
J. W. ELWELL NO. 7—Schooner, 137 tons; N. J. Pilot.
T. S. NEGUS NO. 1—Schooner, 134 tons; N. J. Pilot.
MARY E. FISH NO. 4—Schooner, 107 tons; N. J. Pilot.
WALLACE BLACKFORD—Schooner smack, 80 tons; E. H. Rogers & Co., owner.
W. H. VAN NAME—Working schooner, 180 tons; W. H. Van Name, owner.
REINDEER—Working schooner, 140 tons; Capt. Howard, owner.
SHARPSHOOTER—Working schooner, 120 tons; C. M. Crossman, owner.
RACER—Working schooner, 130 tons; Eugene Howard, owner.
Ocean regatta with classes for New York pilot boats, working schooners and fishermen, for the Bennett prizes. Owl's Head, N. Y., to and around Cape May Light Vessel and return to Sandy Hook Light Vessel. Won by Enchantress. $1,000 purse to pilot boat T. S. Negus; $250 purse to working schooner Wm. H. Van Name; $250 purse to schooner smack Wallace Blackford.

1873—FAUSTINE—Schooner, 95 tons; G. P. Russell, owner.
New York to Cowes, 18 days.

1873—ENCHANTRESS—Schooner, 276 tons; J. F. Loubat,
Oct. 14. owner.
DREADNAUGHT—Schooner, 240 tons; A. B. Stockwell, owner.
Match race, Cape May challenge cup: Sandy Hook to Cape May Light Vessell and return. Sailover for Enchantress.

1874—ENCHANTRESS—Schooner, 320 tons; J. F. Loubat, owner, and three English schooners and cutters; French rules.
International yacht race off Havre; ocean course about 45 miles. Won by Corinne, English schooner.

1874—VIKING—Schooner, 151 tons; Mahlon Sands, owner.
New York to Cowes, 30 days.

1874—EVA—Schooner, 77 tons; E. Bird Grubb, owner.
Winter cruise to West Indies and return.

1874—NETTIE—Schooner, 116 tons; Rev. Geo. Hepworth, owner.
Cruise to Bay St. Lawrence and return.

1874—ENCHANTRESS—Schooner, 320 tons; J. F. Loubat,
July 27. owner.
FAUSTINE—Schooner, 120 tons; S. Peabody Russell, owner, and other boats.
Havre to South Sea; race for French prizes. Won by Corinne, English schooner.

1874—ENCHANTRESS—Schooner, 320 tons; J. F. Loubat,
Aug. 8. owner.
EGERIA—Schooner, 152 tons; J. Mulholland, owner.
Prince of Wales challenge cup: Around Isle of Wight, 105 miles. Won by Egeria.

1874-5—JOSEPHINE—Schooner, 143 tons; Lloyd Phœnix, owner.
Winter cruise to the Windward Islands.

1874-5—TIDAL WAVE—Schooner, 153 tons; Wm. Voorhis, owner.
Winter. Cruise to Windward Islands and return.

1875—ENCHANTRESS—Schooner, 320 tons; J. F. Loubat, owner.
Cruise from Cowes to Norway and Baltic ports.

1875—VIKING—Schooner, 151 tons; Mahlon Sands, owner.
Cowes to New York.

1875—Fourteen schooners, six sloops and five steam yachts. N.
July. Y. Y. C.
Squadron ocean cruise to Cape May.

1875—IDEAL—Steam yacht, 200 tons, Theo. Havemeyer, owner.
July 1. LOOKOUT—Steam yacht, 76 tons; Jacob Lorillard, owner.
Around Long Island. First steam yacht race over ocean course. Won by Ideal.

1875—Nine schooner and four sloops. N. Y. Y. C.
July 13. Cape May regatta, 20 miles to sea and return. Winners: Madeleine, schooner; Vindex, sloop.

1875—RESOLUTE—Schooner, 206 tons; Rufus Hatch, owner.
Oct. DREADNAUGHT—Schooner, 231 tons; C. J. Osborn,
12. owner.
VESTA—Schooner, 191 tons; S. M. Mills, owner.
Sweepstakes; Sandy Hook Lightship to and around Cape May Lightship and return, 212 miles. Won by Resolute.

1875—DAUNTLESS—Schooner, 267 tons; J. G. Bennett, owner.
Oct. RESOLUTE—Schooner, 210 tons; Rufus Hatch, owner.
27. Match race, Sandy Hook to and around Cape May Lightship and return, 220 miles. Won by Dauntless.

1876—VESTA—Schooner, 191 tons; S. M. Mills, owner.
New York to Queenstown.

1876—AMERICA—Schooner, 170 tons; B. F. Butler, owner.
June ALARM—Schooner, 225 tons; G. L. Kingsland, owner.
26. GRACIE—Sloop, 71 tons: J. R. Halsey, owner.
ARROW—Sloop, 66 tons; Daniel Edgar, Jr., owner.
VINDEX—Sloop, 54 tons; R. Center, owner.
WINDWARD—Sloop, 27 tons; H. L. Willoughby, owner.
Centennial Regatta, N. Y. Y. C. rules. From Sandy Hook to and around Cape May Light Vessel and return, about 220 miles. Won by America, schooner; Arrow, sloop.

1876—IDLER—Schooner, 191 tons; Samuel Colgate, owner.
July WANDERER—Schooner, 208 tons; James Stillman, owner.
27. TIDAL WAVE—Schooner, 202 tons; Wm. Voorhis, owner.
COUNTESS OF DUFFERIN—Schooner; Chas. Gifford, owner.
Brenton's Reef challenge cup. Sandy Hook Lightship to and around Brenton's Reef Lightship and return. Won by Idler.

1876—ATALANTA—Schooner, 145 tons; Wm. Astor, owner.
Oct. IDLER—Schooner, 191 tons; Samuel Colgate, owner.
12. Ocean race for Loubat cup. From Owl's Head to Sandy Hook Light Vessel; thence to Cape May Light Vessel, and return. Won by Atalanta.

1877—AMBASSADOR—Schooner, 431 tons; Wm. Astor, owner.
Winter cruise to Florida.

1877—WANDERER—Schooner, 208 tons; Vice-Com. J. Stillman, owner.
Winter cruise to Florida.

1877—IDLER—Schooner, 191 tons; Samuel J. Colgate, owner.
Winter cruise to West Indies.

1877—IDLER—Schooner, 191 tons; Samuel Colgate, owner.
Sept. VESTA—Schooner, 225 tons; S. M. Mills, owner.
7. RAMBLER—Schooner, 293 tons; W. H. Thomas owner.
DREADNAUGHT—Schooner, 264 tons; C. J. Osborn, owner.
Ocean race for the Cape May challenge cup. From Sandy Hook Light Vessel to Cape May Light Vessel and return. Won by Idler.

1878—JEANNETTE—Steam yacht (bark), 145ft. l.w.l.; Jas. G. Bennett, owner.
A voyage in search of the North Pole, in command of Lieut. C. W. de Long, U. S. N., and N. Y. Y. C. Lost in the Arctic Ocean.

1879—INTREPID—Schooner, 100 tons; Lloyd Phœnix, owner.
Jan.-May. Winter cruise to West Indies.

1880—RESOLUTE—Schooner, 105 tons; C. G. Francklyn, owner.
Cruise to Labrador and return.

1880-1—INTREPID—Schooner, 100 tons; Lloyd Phœnix, owner.
May-May. Cruise to European waters and return.

1881—DAUNTLESS—Schooner, 116 tons; J. R. Waller, owner.
April. Cruise South.

1882—WANDERER—Schooner, 208 tons; E. D. Morgan, owner.
Cruised to European waters, and arrived at New York July 16.

1882—DAUNTLESS—Schooner, 116 tons; C. H. Colt, owner.
Sept. To Europe; returned Oct. 11, 1883.

1882—GITANA—Schooner, 97 tons; W. F. Weld, owner.
Nov. A cruise to the West Indies.

1882-3—INTREPID—Schooner, 100 tons; Lloyd Phœnix, owner.
Nov.-Apr. To West Indies and return to New York.

1883—FORTUNA—Schooner, 105ft. l.w.l.; H. S. Hovey, owner.
Cruise to Mediterranean and return.

1883—NORSEMAN—Schooner, 113ft. l.w.l.; Ogden Goelet,
Summer. owner.
Sailed for a cruise in European waters, returning Oct. 15, to New York.

1884—DAUNTLESS—Schooner, 116ft. l.w.l.; C. H. Colt, owner.
Crossed the ocean, returning from European trip.

1884—NAMOUNA—Steam Yacht, 217ft. l.w.l.; Com. J. G. Bennett, N. Y. Y. C., owner.
Arrived at Newport from Bordeaux, France.

1884—CARMELITA—Schooner, 65ft. l.w.l.; J. Coleman, owner.
New York to Rio Janeiro and return.

1884—FORTUNA—Schooner, 105ft. l.w.l.; H. S. Hovey, owner.
Cruise to West Indies and return.

1884—MAGNOLIA—Steam yacht, 93ft. l.w.l.; Fairman Rogers, owner.
Cruise to West Indies and return.

1884—MONTAUK—Schooner, 94ft.; Rear-Com. Saml. R. Pratt,
Feb.-May. N. Y. Y. C., owner.
Cruise to West Indies and return to New York.

1884—ILEEN—Cutter, 65ft. l.w.l.; A. Padelford, owner.
March. Cruise to Fernandina, Fla., and return.

1884—WANDERER—Schooner, 106ft. l.w.l.; Geo. Weld, owner.
April. Cruise to West Indies and return.

1884—FLEETWING—Schooner, 121ft. racing length; R. S. El-
June 16. liott, owner.
MONTAUK—Schooner, 121ft., racing length; S. R. Pratt, owner.
FORTUNA—Schooner, 112ft. racing length; H. S. Hovey, owner.
RUTH—Schooner, 98ft. racing length; H. Hathaway, owner.
GRAYLING—Schooner, 91ft. racing length; L. A. Fish, owner.
ESTELLE—Schooner, 88ft. racing length; J. D. Smith, owner.
Race around Long Island, about 250 miles. Won by Grayling, schooner.

1884—GRACIE—Sloop, 79ft. racing length; J. P. Earle, owner.
June ILEEN—Cutter, 78ft. racing length; A. Padelford, owner.
16. FANNY—Sloop, 72ft. racing length; Prince & Whitely, owner.
WENONAH—Cutter, 72ft. racing length; J. Stillman, owner.
HILDEGARD—Sloop, 69ft. racing length; H. Oelrichs, owner.
ATHLON—Sloop, 58ft. racing length; J. C. Barron, owner.
VIXEN—Sloop, 51ft. racing length; F. C. Lawrence, Jr., owner.
ORTVA—Cutter, 69ft. racing length; C. Smith Lee, owner.
Won by Fanny, sloop, first class, and Vixen, sloop, in second class.

1885—WANDERER—Schooner, 106ft. l.w.l.; Geo. Weld, owner.
Cruise to West Indies and return.

1885—DAUNTLESS—Schooner, 116ft. l.w.l.; C. H. Colt, owner.
Cruise to Bermuda and return.

1885—GITANA—Schooner, 97ft. l.w.l.; Wm. F. Weld, owner.
Cruise to West Indies and return.

1885—AMY—Steam yacht, 185ft. l.w.l.; E. D. Morgan, owner.
Sailed Nov. 22, 1884, from Southampton, Eng., for the Mediterranean, and eastward through the Suez Canal to Bombay, Singapore and Manila, and return to New York.

1885—MOHEGAN—Schooner, 100ft. l.w.l.; H. D. Burnham,
Spring. owner.
A cruise to the West Indian waters.

1885—BRUNHILDE—Schooner, 102ft. l.w.l.; John J. Phelps,
June 29. owner.
Sailed from New London on a cruise around the world, going eastward. Returned via Cape Horn to New York May, 1888. Time of cruise, three years.

1885—DAUNTLESS—Schooner, 116ft. l.w.l.; C. H. Colt, owner.
Sept. GENESTA—Cutter, 81ft. l.w.l.; Sir Richard Sutton, owner.
21. Match for Brenton's Reef challenge cup. Sandy Hook Light Vessel to Brenton's Reef Light Vessel and return, about 300 miles. Won by Genesta.

1885—DAUNTLESS—Schooner, 116ft. l.w.l.; C. H. Colt, owner.
Sept. GENESTA—Cutter, 81ft. l.w.l.; Sir Richard Sutton, owner.
26. Match for Cape May challenge cup. Sandy Hook Light Vessel to Cape May Light Vessel and return, about 220 miles. Won by Genesta.

1886—NORNA—Schooner, 95ft. l.w.l.; Alex. J. Leith, owner.
Cruise to West Indies and return.

1886—CORONET—Schooner, 125ft. l.w.l.; R. T. Bush, owner.
June. Sailed for Cowes, I. W., Eng.

1886—MIRANDA—Schooner, 86ft. l.w.l.; G. H. B. Hill, owner.
Aug. 4. Arrived at New York from Cowes, having left that port June 26.

1886—GITANA—Schooner, 97ft. l.w.l.; Wm. F. Weld, owner.
Winter Cruise to Mediterranean and return.
& Spring.

1886—AMY—Steam yacht, 185ft. l.w.l.; E. D. Morgan, owner.
October. Left New York for Cowes, I. W.

1886—NIRVANA—Schooner, 72ft. l.w.l.; Gen. Perkins, owner.
Winter Cruise to Nassau, Bahamas and return.
& Spring.

1886—AMBASSADRESS—Schooner, 130ft. l.w.l.; Nath. Thayer,
Winter owner.
& Spring. Cruise to West Indies and return.

1886—MONTAUK—Schooner, 95ft. l.w.l.; John E. Brooks,
Winter Cruise to West Indies and return.
& Spring.

1886—CARLOTTA—Schooner, 65ft. l.w.l.; H. Belknap, owner.
Winter. Cruise to West Indies and return.
& Spring.

1887—RUTH—Schooner, 93ft. l.w.l.; Henry Marquand, owner.
Cruise to Newfoundland and return.

1887—JULIA—Schooner, 80ft. l.w.l.; Chester W. Chapin, owner.
January. Sailed for a cruise in West Indian waters.

1887—WANDERER—Schooner, 106ft. l.w.l.; Geo. W. Weld,
February. owner.
Sailed for West Indian cruise.

1887—ALVA—Steam yacht, 252ft. l.w.l.; W. K. Vanderbilt, owner.
February. Sailed from New York for cruise to West Indies, returning home March 24.

1887—DAUNTLESS—Schooner, 116ft. l.w.l.; C. H. Colt, owner.
March CORONET—Schooner, 125ft. l.w.l.; R. T. Bush, owner.
12. Ocean match race, N. Y. Y. C., New York to Cork Harbor, Ireland. Won by Coronet.

1887—NIRVANA—Schooner, 72ft. l.w.l.; Gen. Perkins, owner.
Winter Cruise to Nassau, Bahamas.
and Spring.

1887—INTREPID—Schooner, 100ft. l.w.l.; Lloyd Phœnix, owner.
June. Sailed for a cruise in European waters. Returned April, 1888.

1887—FORTUNA—Schooner, 105ft. l.w.l.; H. S. Hovey, owner.
June. Sailed for a cruise in European waters.

1887—ALVA—Steam yacht, 252ft. l.w.l.; W. K. Vanderbilt, owner.
July. Sailed for a cruise in European waters. Alva's eastern point was Alexandria, Egypt.

1887—Nine schooners, five sloops (first class), nine sloops (sec-
August. ond class), N. Y. Y. C.
Ocean squadron run, N. Y. Y. C., Oak Bluffs to Marblehead, 110 miles. Cups presented by J. P. Morgan, Esq. Won by Sachem (schooner), Volunteer (sloop) and Bedouin (sloop).

1887—NIRVANA—Schooner, 72ft. l.w.l.; Gen. H. W. Perkins,
Dec. 10. owner.
Left New York for Nassau, Bahamas.

1888—DAUNTLESS—Schooner, 116ft. l.w.l.; C. H. Colt, owner.
Cowes to New York.

1888—YAMPA—Schooner, 110ft. l.w.l.; Chester W. Chapin,
January. owner.
Sailed from New York for a cruise in West Indian waters.

1888—MONTAUK—Schooner, 95ft. l.w.l.; John E. Brooks,
March. owner.
Sailed for a cruise in West Indian waters.

1888—CORONET—Schooner, 125ft. l.w.l.; R. T. Bush, owner.
Mar. 23. Sailed from New York for San Diego, Cal., via Cape Horn. Sailed thence around the world, arriving at New York from Gibraltar, April, 1899.

1888—IROQUOIS—Schooner, 80ft. l.w.l.; T. J. Coolidge, Jr.,
Spring. owner.
Cruise in West Indian waters.

1888—WANDERER—Schooner, 106ft. l.w.l.; Geo. W. Weld,
April. owner.
Cruise to West Indian waters.

1888—BRUNHILDE—Schooner, 102ft. l.w.l.; John J. Phelps,
April. owner.
Left New York for a cruise to West Indian and European waters.

1888—FORTUNA—Schooner, 97ft. l.w.l.; Henry S. Hovey, owner.
Aug. 16. Arrived at Marblehead 32 days from Southampton, Eng.

1889—YAMPA—Schooner, 110ft. l.w.l.; Chester W. Chapin, owner.
Cruise from New York to European waters.

1889—ALVA—Steam yacht, 252ft. l.w.l.; W. K. Vanderbilt, owner.
Feb. 2. Left Baltimore for a cruise in European waters. Returned to Newport, R. I., July 20.

1889—GITANA—Schooner, 99ft. l.w.l.; Wm. F. Weld, owner.
April. Sailed from Boston for a cruise in European waters.

1889—FREDONIA—Schooner (afterward a fisherman); J. Mal-
Summer. colm Forbes, Jr. (N. Y. Y. C.), owner.
A cruise to the Azore Islands.

1890—STRANGER—Cutter, 65ft. l.w.l.; Geo. H. Warren, owner.
Sailed from Boston to Liverpool, Eng.

1890—IROQUOIS—Schooner, 80ft. l.w.l.; Ralph N. Ellis, owner.
Cruise to Bermuda and return.

1890—SAGAMORE—Steam yacht, 160ft. l.w.l.; John Slater,
April. owner.
Arrived from cruise in West Indian waters.

1890—ALVA—Steam yacht, 252ft. l.w.l.; W. K. Vanderbilt, owner.
Feb. 4. Voyage to Great Britain, France, Portugal, Spain, Italy and return to Newport, R. I., July 8.

1891—ALVA—Steam yacht, 252ft l.w.l.; W. K. Vanderbilt, owner.
Feb. 21. Sailed for cruise in the Mediterranean. Returned to New York April 16.

1891—SULTANA—Auxiliary, 155ft. l.w.l.; Trenor L. Park, owner.
May. Sailed for cruise in European waters.

1891—UTOWANA—Auxiliary, 165ft. l.w.l.; W. West Durant,
October. owner.
Sailed for cruise in European waters.

1892—SAGAMORE—Steam yacht, 160ft. l.w.l.; W. A. Slater,
owner.
A cruise South and return via Bermuda.

1892—YAMPA—Schooner, 110ft. l.w.l.; C. W. Chapin, owner.
Cruise to European waters.

1892—SULTANA—Auxiliary, 155ft. l.w.l.; Trenor L. Park, owner.
June 2. Return to New York from Mediterranean, via Azores.

1892—WADENA—Steamer, 147ft. l.w.l.; J. H. Wade, owner.
Jan.-Oct. Cruise of 30,000 miles, European waters, etc.

1892—Nineteen schooners and 7 sloops; N. Y. Y. C.
Aug. 8. Ocean squadron run, New York Y. C., Vineyard Haven to Marblehead, 110 miles, for cups given by J. P. Morgan, Esq. Won by Constellation (schooner), and Wasp (sloop).

1893—IROQUOIS—Schooner, 80ft. l.w.l.; Ralph N. Ellis, owner.
Cruise to the West Indies.

1893—ALERT—Schooner—90ft. l.w.l.; John N. Luning, owner.
Cruise in European waters.

1893—GITANA—Schooner, 99ft. l.w.l.; Geo. W. Weld, owner.
Cruise in West Indian waters.

1893—NAVAHOE—Sloop, 84ft. l.w.l.; R. P. Carroll, owner.
April. Sailed Newport to Cowes, I. W., Eng.

1893—SAGAMORE—Steam yacht, 160ft. l.w.l.; Edgar Scott,
April. owner.
Left for a cruise around the world to the eastward, arriving in New York again Sept. 13, 1894.

1893—CONQUEROR—Steam yacht, 188ft. l.w.l.; F. W. Vander-
Spring. bilt, owner.
Sailed for a cruise in West Indian waters.

1893—COMANCHE—Steam yacht, 165ft. l.w.l.; H. M. Hanna, owner.
Spring. Cruise to Cuba and the West Indies.

1893—ONEIDA—Steam yacht, 121ft. l.w.l.; E. C. Benedict, owner.
Spring. Cruise to Cuba and Nassau.

1893—ATLANTIC—Schooner, 83ft. l.w.l.; Wilson Marshall, owner.
Spring. Cruise to Nassau and West Indian waters.

1893—ITUNA—Steam yacht, 135ft. l.w.l.; Aug. Belmont, owner.
Spring. Cruise in West Indian waters.

1893—SAGAMORE—Steam yacht, 100ft. l.w.l.; Edgar Scott, owner.
Winter & Spring. Cruise in West Indian waters.

1893—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Geo. Trotter, owner.
July 1. Sailed for a cruise in European waters.

1893—ALMY—Steam yacht, 155ft. l.w.l.; Frederick Gallatin, owner.
Aug. 1. Sailed for a cruise to Newfoundland.

1893—BRITANNIA—Cutter, 85ft. l.w.l.; H. R. H. the Prince of Wales, owner.
Sept. NAVAHOE—Sloop, 84ft. l.w.l.; R. P. Carroll (N. Y. Y. C.), owner.
Cape May challenge cup. Ocean course, Isle of Wight to Cherbourg and return. Won by Britannia.

1893—BRITANNIA—Cutter, 85ft. l.w.l.; H. R. H. the Prince of Wales, owner.
Sept. NAVAHOE—Sloop, 84ft. l.w.l.; R. P. Carroll (N. Y. Y. C.), owner.
Brenton's Reef challenge cup. Ocean course, Isle of Wight to Cherbourg and return. Won by Navahoe.

1893—VALIANT—Steam yacht, 293ft. l.w.l.; W. K. Vanderbilt, owner.
Nov. 19. Sailed from New York for a cruise in European waters.

1893—NAVAHOE—Sloop, 84ft. l.w.l.; R. P. Carroll, owner.
Nov. 5. Arrived from Cowes, I. W., Eng., about 46 days out.

1894—INTREPID—Auxiliary, 132ft. l.w.l.; Lloyd Phœnix, owner.
Feb.-May. Cruise in West Indian waters.

1894—LASCA—Schooner, 90ft. l.w.l.; John E. Brooks, owner.
April. Sailed from New York for Glasgow, Scotland.

1894—CORONET—Schooner, 124ft. l.w.l.; A. Curtis James, owner.
Winter & Spring. Cruise in West Indian waters.

1894—SULTANA—Auxiliary, 155ft. l.w.l.; J. R. Drexel, owner.
Spring. Southern cruise.

1894—BARRACOUTA—Steam yacht, 114ft. l.w.l.; John R. Fell, owner.
Spring. Cruise in West Indian waters.

1894—MARGARITA—Steam yacht, 206ft. l.w.l.; A. J. Drexel, owner.
May 1. Left Philadelphia for cruise to Bermuda and return.

1894—VIGILANT—Yawl 86ft. l.w.l.; Geo. J. Gould, owner.
May-June. Crossed from New York to Gourock, Scotland.

1894—WADENA—Steam yacht, 157ft. l.w.l.; J. H. Wade, owner.
June 7. Passed out by Sandy Hook bound on a cruise around the world. Arrived home June, 1895.

1894—ATALANTA—Steam yacht, 229ft. l.w.l.; Geo. J. Gould, owner.
June. New York to Cowes.

1894—INTREPID—Auxiliary, 132ft. l.w.l.; Lloyd Phœnix, owner.
Summer. Cruise to Quebec, via ports in western Newfoundland.

1894—ELEANOR—Steam yacht, 208ft. l.w.l.; W. A. Slater, owner.
October. Sailed for a cruise 42,405 miles around the world, arriving New York via Cape Horn, March 10, 1896.

1894-5—ITUNA—Steam yacht, 135ft. l.w.l.; A. V. Armour, owner.
Dec.-Apr. Cruise to Central American waters.

1894—MAY—Steam yacht, 204ft. l.w.l.; Com. E. D. Morgan, N. Y. Y. C., owner.
July 3. Sailed for Cowes, I. W., Eng.

1895—BARRACOUTA—Steam yacht, 114ft. l.w.l.; J. R. Fell, owner.
Cruise to Mediterranean.

1895—SYLVIA—Steam yacht, 130ft. l.w.l.; Vice-Com. E. M. Brown, owner.
January. Queenstown, Ireland, to New York; Capt. Arthur H. Clark, N. Y. Y. C., in command.

1895—YAMPA—Schooner, 110ft. l.w.l.; R. S. Palmer, owner.
Jan. 17. Sailed for a cruise in the Mediterranean.

1895—VIGILANT—Yawl, 86ft. l.w.l.; Geo. J. Gould, owner.
April. Sailed from Southampton for New York.

1895—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Geo. Trotter, owner.
May 2. Arrived at New York after an extended cruise in European waters.

1895—VALIANT—Steam yacht, 293ft. l.w.l.; Wm. K. Vanderbilt, owner.
June. Arrived at New York from Gibraltar.

1895—LASCA—Schooner, 90ft. l.w.l.; John E. Brooks, owner.
June. Arrived at New York after an absence of 15 months in European waters.

1895—ALMY—Steam yacht, 155ft. l.w.l.; Frederick, Gallatin, owner.
July-Aug. Cruise to Maritime Provinces.

1895—ATALANTA—Steam yacht, 229ft. l.w.l.; Geo. J. Gould, owner.
August. Arrived at New York from Europe.

1895—MARGARITA—Steam yacht, 206ft. l.w.l.; A. J. Drexel, owner.
August. Southampton to Philadelphia.

1895—YAMPA—Schooner, 110ft. l.w.l.; R. S. Palmer, owner.
October. Falmouth, Eng., to Boston.

1895—SAPPHIRE—Steam yacht, 119ft. l.w.l.; A. L. Barber, owner.
Dec. Arrived from a cruise in West Indian waters.

1895—CORONET—Schooner, 124ft. l.w.l.; A. C. James, owner.
Dec. Sailed for San Francisco via Cape Horn.

1895—TRITON—Schooner, 62ft. l.w.l.; E. C. Clark, owner.
Dec. 15. Sailed for a cruise to Bahamas and return.

1895—WANDA—Steam yacht, 127ft. l.w.l.; H. S. Henry, owner.
Winter & Spring. Cruise in West Indies.

1895—CORONET—Schooner, 124ft l.w.l.; A. C. James, owner.
Winter & Spring. A West Indian cruise via Bermuda.

1896—VALIANT—Steam yacht, 291ft. l.w.l.; W. K. Vanderbilt, owner.
January. Sailed for Mediterranean ports.

1896—ARCTURUS—Auxiliary, 135ft. l.w.l.; Rutherford Stuyvesant, owner.
January. From Southampton, Eng., for a cruise in the Mediterranean.

1896—AILEEN—Steam yacht, 115ft. l.w.l.; Edwin A. Stevens, owner.
January. Sailed for a cruise to West Indian waters.

1896—BRUNHILDE—Schooner, 102ft. l.w.l.; J. M. Masury, ownér.
January. Sailed for a cruise in West Indian waters.

1896—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Geo. Lord Day, owner.
January. Sailed for a cruise in West Indian waters.

1896—NAVAHOE—Yawl, 84ft. l.w.l.; R. P. Carroll, owner.
February. Sailed for a cruise in West Indian waters.

1896—NORNA—Schooner, 84ft. l.w.l.; E. R. Coleman, owner.
February. Cruise to Bermuda and return.

1896—HERMIONE—Steam yacht, 145ft. l.w.l.; H. L. Pierce, owner.
February. Cruise to the Windward Islands.

1896—YAMPA—Schooner, 110ft. l.w.l.; R. S. Palmer, owner.
February. Sailed for a cruise in West Indian waters.

1896—COMANCHE—Steam yacht, 165ft. l.w.l.; H. M. Hanna, owner.
Feb.-Apr. Cruise to West Indian waters.

1896—INTREPID—Auxiliary, 132ft. l.w.l.; Lloyd Phœnix, owner.
Mar. 12. Sailed for a cruise in the Mediterranean.

1896—BLACK PEARL—Steam yacht, 144ft. l.w.l.; E. B. Sheldon, owner.
March. Sailed for a cruise in the West Indian waters.

1896—CORONET—Schooner, 124ft. l.w.l.; A. C. James, owner.
April 25. Sailed from San Francisco for Japan. Carried scientists to observe eclipse of sun.

1896—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Geo. Lord Day, owner.
May 21. Sailed for a cruise in European waters.

1896—MARGARITA—Steam yacht, 239ft. l.w.l.; A. J. Drexel, owner.
Aug. 16. Left Troon, Scotland, for New York, arriving Sept. 13.

1896—ALMY—Steam yacht, 156ft. l.w.l.; Frederic Gallatin, owner.
Summer. 17,000 mile cruise from New York to Baltic ports and return.

1896—INTREPID—Auxiliary, 132ft. l.w.l.; Lloyd Phœnix, owner.
Oct. 31. Arrived from a cruise to Mediterranean and English ports.

1896—LOUNGER—Yawl, 35ft. l.w.l.; Jas. B. Hammond, owner.
Winter. A cruise to the Bahama Islands.

1896—VARUNA—Steam yacht, 240ft. l.w.l.; Eug. Higgins, owner.
Dec. 2. Sailed from New York for a cruise in the Mediterranean.

1896—COLUMBIA—Steam yacht, 189ft. l.w.l.; J. Harvey Ladew, owner.
Dec. 4-May 15. A cruise to the West Indian and Bahama Islands.

1897—NOURMAHAL—Steam yacht, 227ft. l.w.l.; J. J. Astor, owner.
Cruise from New York to West Indian and Central American ports.

1897—SULTANA—Steam yacht, 155ft. l.w.l.; J. R. Drexel, owner.
Made a cruise in West Indian and European waters.

1897—VALIANT—Steam yacht, 291ft. l.w.l.; W. K. Vanderbilt, owner.
A cruise in European waters.

1897—PENELOPE—Steam yacht, 185ft. l.w.l.; E. H. Converse, owner.
April. A cruise to Bermuda, etc.

1897—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Chas. Smithers, owner.
Spring. A cruise in West Indian waters.

1897—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Geo. Lord Day, owner.
Spring From New York to Southampton.

1897—MAY—Steam yacht, 204ft. l.w.l.; Mrs. Drexel Fell, owner.
Spring & Summer. An extended cruise in the Mediterranean.

1897—YAMPA—Schooner, 110ft. l.w.l.; R. S. Palmer, owner.
May 22. Sailed for a cruise in European waters.

1897—ELEANOR—Steam yacht, 208ft. l.w.l.; Oliver H. Payne, owner.
Summer. Cruise from New York to European waters and return.

1897—VARUNA—Steam yacht, 240ft. l.w.l.; Eug. Higgins, owner.
July. Arrived in Newport from a cruise in European waters.

1897—ALCEDO—Steam yacht, 152ft. l.w.l.; G. W. C. Drexel, owner.
July-Dec. A cruise in European waters.

1897—Sixteen schooners, six sloops; N. Y. Y. C.
Aug. 7. Race for cups presented by Com. J. P. Morgan, N. Y. Y. C.; Vineyard Haven to Bakers Island, Mt. Desert, 210 miles at sea. Won by Colonia and Amorita (schooners) and Vigilant and Wasp (sloops).

1897—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Geo. Lord Day, owner.
August. Sailed from Southampton, Eng., for New York.

1897—LASCA—Schooner, 90ft. l.w.l.; J. S. Watson, owner.
Summer-Autumn. Made a cruise from New York to the Mediterranean and the ports of North Europe.

1897—MARGARITA—Steam yacht, 239ft. l.w.l.; A. J. Drexel, owner.
Dec. 23. Arrived in the Clyde from Philadelphia.

1897—CATANIA—Steam yacht, 230ft. l.w.l.; C. Vanderbilt, owner.
Dec. 6. Sailed fro mSouthampton for a cruise in the Mediterranean.

1897—SCYTHIAN—Steam yacht, 130ft. l.w.l.; Susan de F. Day, owner.
Winter. Cruise from New York to West Indian ports and return.

1898—NAHMA—Steam yacht, 275ft. l.w.l.; Robert Goelet, owner.
Cruise from England to Mediterranean.

1898—NARADA—Steam yacht, 194ft. l.w.l.; Henry Walters, owner.
Jan. 20. Sailed from New London for a cruise in the Mediterranean.

1898—ANDRIA—Steam yacht, 161ft. l.w.l.; John E. Brooks, owner.
Winter. A cruise in the Mediterranean.

1898—NAHMA—Steam yacht, 275ft. l.w.l.; Robt. Goelet, owner.
Winter. Sailed for a cruise in West Indian waters.

1898—SCYTHIAN—Steam yacht, 130ft. l.w.l.; Miss S. de F. Day, owner.
Feb. 9. Sailed for a cruise in West Indian waters.

1898—INTREPID—Schooner, 102ft. l.w.l.; E. F. Hunt, owner.
February. Cruise to West Indian waters.

1898—MARGARITA—Steam yacht, 239ft. l.w.l.; A. J. Drexel, owner.
Feb. 12. Sailed from Southampton for a cruise in the Mediterranean.

1898—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Geo. Lord Day, owner.
Mar. 18. Sailed from New York for Southampton, Eng.

1898—HILDEGARDE—Schooner, 103ft. l.w.l.; Geo. W. Weld, owner.
March 20. Sailed from Newport News for a cruise to West Indian waters.

1898—ENTERPRISE—Auxiliary, 135ft. l.w.l.; A. J. Cassatt, owner.
Mar.-Apr. A cruise to Bermuda and return.

1898—MAY—Steam yacht, 204ft. l.w.l.; A. J. Van Rensselaer, owner.
Spring. Cruise in the West Indies.

1898—UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour, owner.
Spring. Cruise to Nassau and return to New York.

1898—BRUNHILDE—Schooner, 102ft. l.w.l.; J. M. Masury, owner.
May 21. Sailed from Rio Janeiro for ——

1898—DUQUESNE—107ft. l.w.l.; Theodore R. Hostetter, owner.
Autumn. Made trips from Key West and Tampa, Fla., to Santiago and other ports in Cuba with hospital supplies and luxuries for the United States forces.

1898—FLEUR DE LYS—Schooner, 87ft. l.w.l.; Geo. Lord Day, owner.
October. Sailed from Southampton for a cruise in the Mediterranean.

1898—BARRACOUTA—Steam yacht, 114ft. l.w.l.; Edw. Kelly, owner.
Oct.-Dec. Cruised in West Indian waters.

1898—VARUNA—Steam yacht, 240ft. l.w.l.; Eug. Higgins, owner.
Nov. 15 Arrived at New York from Southampton, Eng.

1898—CORONET—Schooner, 124ft. l.w.l.; F. S. Pearson, owner.
Dec. Sailed for a cruise to the West Indies.

1898—VARUNA—Steam yacht, 240ft. l.w.l.; Eug. Higgins, owner.
Dec. 14. Sailed for Bermuda, West Indian and Mediterranean waters.

1898—INTREPID—Schooner, 102ft. l.w.l.; E. C. Clark, owner.
Dec. 23. Sailed for a cruise in West Indian waters.

1898—UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour, owner.
Dec. 24. Sailed for Yucatan, Central America.

YACHTS OF THE N.Y.Y.C. THAT SERVED AS GUN BOATS DURING THE WAR WITH SPAIN, 1898.

SOVEREIGN (Govt. name, Scorpion); M. C. D. Borden, owner.
CORSAIR (Govt. name, Gloucester); J. P. Morgan, owner.
JOSEPHINE (Govt. name, Vixen); P. A. B. Widener, owner.
ALICIA (Govt. name, Hornet); Henry A. Flagler, owner.
ALMY (Govt. name, Eagle); Frederick Gallatin, owner.
COLUMBIA (Govt. name, Wasp); J. Harvey Ladew, owner.
THESBIA (Govt. name, Hist); David Dowes, Jr.
AILEEN; Richard Stevens, owner.
RESTLESS; Hiram W. Sibley, owner.
VIKING; H. A. Hutchins, owner.
ILLAWARRA (Govt. name, Oneida); Eugene Tompkins, owner.
PENELOPE (Govt. name, Yankton); H. E. Converse, owner.
COMANCHE (Govt. name, Frolic); H. Melville Hanna, owner.
STRANGER; Mrs. George Lewis, owner.
EUGENIA; J. Gardner Cassatt, owner.
SYLVIA; Edward M. Brown, owner.
ELFRIDA; W. Seward Webb, owner.
SHEARWATER; Henry R. Wolcott, owner.
KANAWHA; John P. Duncan, owner.

LOANED TO THE GOVERNMENT.

FREELANCE; F. A. Schermerhorn, owner.
BUCCANEER; William R. Hearst, owner.

1899—ALCEDO—Steam yacht, 173ft. l.w.l.; G. W. C. Drexel, owner.
Jan. Sailed from Philadelphia for a cruise in West Indian waters.

1899—NARADA—Steam yacht, 194ft. l.w.l.; Henry Walters, owner.
Jan. A cruise to the Mediterranean.

1899—DUNGENESS—Steam yacht; Mrs. Lucy C. Carnegie, owner.
Jan. 31. Sailed from Fernandina for a cruise south.

1899—NOURMAHAL—Steam yacht, 227ft. l.w.l.; J. J. Astor, owner.
Feb. 2. Sailed for a cruise in the Gulf of Mexico and Central America.

1899—FLEUR DE LYS—Schooner, 89ft. l.w.l.; Geo. Lord Day, owner.
Feb. 10 Arrived in New York from the Mediterranean.

1899—LASCA—Schooner, 90ft. l.w.l.; J. S. Watson, owner.
Feb.-Apr. Cruised in West Indian waters.

1899—INGOMAR—Schooner, 63ft. l.w.l.; M. F. Plant, owner.
March. Cruise to Jamaica and Florida ports.

1899—FLEUR DE LYS—Schooner, 89ft. l.w.l.; Geo. Lord Day, owner.
Mar.-April Cruised in West Indian waters.

1899—BLACK PEARL—Steam yacht, 144ft. l.w.l.; E. B. Sheldon, owner.
Spring. Cruise in West Indian waters.

1899—UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour, owner.
April 24. Returned to New York from Yucatan.

1899—CONQUEROR—Steam yacht, 176ft. l.w.l.; F. W. Vanderbilt, owner.
Spring-Summer. Cruise from New York to the Mediterranean, Adriatic and English waters.

1899—NIAGARA—Steam yacht, 247ft. l.w.l.; Howard Gould, owner.
May 7. Sailed for a cruise in the waters of northern Europe.

1899—UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour, owner.
July 5. Sailed for a cruise to English and Baltic ports. Returned to New York Nov. 4.

1899—NIAGARA—Steam yacht, 247ft. l.w.l.; Howard Gould, owner.
Summer. Made a cruise from New York to northern European waters.

1899—SCYTHIAN—Steam yacht, 130ft. l.w.l.; Miss S. de F. Day, owner.
Summer. Cruise from New York to Labrador and return.

1899—VARUNA—Steam yacht, 240ft. l.w.l.; Eug. Higgins, owner.
Aug. 31. Arrived in New York from an eight months' cruise in European waters.

1899—ERL KING—Steam yacht, 170ft. l.w.l.; A. J. Moxam, owner.
Sept. 22. Arrived from a cruise in northern European waters.

1899—APHRODITE—Steam yacht, 200ft. l.w.l.; O. H. Payne, owner.
Sept. 28. Arrived at New York after a cruise in European waters.

1899—MAY—Steam yacht, 204ft. l.w.l.; Alex. Van Rensselaer, owner.
Winter. Cruised to the West Indies, taking medicine, surgical appliances and luxuries to the soldiers in Cuba and Porto Rico.

1899—FLYING CLOUD—Yawl, 46ft. l.w.l.; Jas. Laughlin, Jr., owner.
Winter. Cruise to the Bahamas.

1900—NARADA—Steam yacht, 194ft. l.w.l.; Henry Walters, owner.
From New York cruised in European waters, returning to New York.

1900—SAFA-EL-BAHR—Steam yacht, 187ft. l.w.l.; F. L. Leland, owner.
Sailed from Southampton, Eng., for a cruise in the Mediterranean.

1900—ALOHA—Auxiliary, 130ft. l.w.l.; A. C. James, owner.
Cruised in European waters from New York.

1900—ENTERPRISE—Auxiliary, 135ft. l.w.l.; F. L. Perin, owner.
Cruise in European waters.

1900—NAHMA—Steam yacht, 275ft. l.w.l.; Mrs. Robt. Goelet, owner.
Cruise in the Mediterranean and English waters.

1900—SULTANA—Steam yacht, 155ft. l.w.l.; J. R. Drexel, owner.
A cruise to the West Indies.

1900—FLEUR DE LYS—Schooner, 89ft. l.w.l.; Chas. Smithers,
Feb.-Apr. owner.
A cruise in West Indian waters.

1900—SCYTHIAN—Steam yacht, 130ft. l.w.l.; Trenor L. Park,
March. owner.
Cruise in West Indian waters.

1900—CONSTELLATION—Schooner, 106ft. l.w.l.; F. Skinner,
April-May. Jr., owner.
Cruise in West Indian waters.

1900—UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour,
May 5. owner.
Sailed for a cruise in European waters. Returned to New York in the autumn.

1900—ENDYMION—Schooner, 100ft. l.w.l.; Geo. Lord Day,
July. owner.
Sandy Hook to the Needles, I. W., Eng., 13 days 20 hours.

1900—VALIANT—Steam yacht, 292ft. l.w.l.; W. K. Vanderbilt,
July-Aug. owner.
Sandy Hook to Plymouth, Eng., 7 days 17 hours, 4 minutes.

1900—JOSEPHINE—Steam yacht, 215ft. l.w.l.; P. A. B. Wid-
Summer. ener, owner.
Cruised in the waters of Northern Europe, from New York.

1900—NIAGARA—Steam yacht, 247ft. l.w.l.; Howard Gould,
Summer. owner.
A cruise to Norway, etc.

1900—VARUNA—Steam yacht, 240ft. l.w.l.; Eug. Higgins, owner.
Oct. 1. Arrived at New York from Europe.

1900—ENDYMION—Schooner, 100ft. l.w.l.; Geo. Lord Day,
Oct. 31. owner.
Southampton, Eng., to New York, 27 days.

1900—VARUNA—Steam yacht, 240ft. l.w.l.; Eug. Higgins, owner.
Nov. Sailed for a cruise in the Mediterranean.

1900—ARCTURUS—Auxiliary, 135ft. l.w.l.; R. Stuyvesant, owner.
Dec. 24. Sailed from Southampton, Eng., for a Mediterranean cruise.

1900—ENDYMION—Schooner, 100ft. l.w.l.; Geo. Lord Day,
Winter. owner.
A cruise to the West Indies.

1900—COLUMBIA—Steam yacht, 165ft. l.w.l.; J. Harvey Ladew,
Winter. owner.
A cruise in West Indian waters.

1900-01—NAHMA—Steam yacht, 275ft. l.w.l.; Mrs. Ogden Goelet, owner.
Cruise from England to Mediterranean ports.

1901—SHEMARA—Steam yacht, 177ft. l.w.l.; A. L. Barber,
Jan.-Feb. owner.
West Indian cruise.

1901—ENTERPRISE—Auxiliary, 135ft. l.w.l.; F. L. Perin, owner.
Jan.-Feb. West Indian cruise.

1901—MERMAID—Sloop, 44ft.l.w.l.; A. P. Stokes, owner.
Jan.-May. Cruise at sea from New York to Bahama Islands and return.

1901—GENESEE—Auxiliary, 110ft. l.w.l.; J. S. Watson, owner.
Feb. Sailed for cruise to the Mediterranean.

1901—CONQUEROR—Steam yacht, 176ft. l.w.l.; F. W. Vander-
Feb.-Apr. bilt, owner.
A cruise to the West Indies.

1901—FLEUR DE LYS—Schooner, 89ft. l.w.l.; Dr. L. A. Stim-
March son, owner.
Sailed for a cruise in European waters; returned to New York.

1901—NARADA—Steam yacht, 194ft. l.w.l.; Henry Walters,
Mar.-Apr. owner.
Cruise to Havana and other West Indian ports.

1901—SULTANA—Auxiliary, 155ft. l.w.l.; J. R. Drexel, owner.
April 14. A cruise in European waters lasting a year.

1901—CONSTELLATION—Schooner, 106ft. l.w.l.; F. Skinner,
Apr.-May. Jr., owner.
A cruise in West Indian waters.

1901—INTREPID—Auxiliary, 132ft. l.w.l.; Lloyd Phœnix, owner.
Apr.-June. A cruise to the Bahamas and Antilles.

1901—MARGARET—Steam yacht, 145ft. l.w.l.; Isaac E. Emerson,
May owner.
Sailed from New York for cruise to Chinese and Japanese waters via the Mediterranean.

1901—NIAGARA—Steam yacht, 247ft. l.w.l.; Howard Gould,
July 2. owner.
Sailed for a cruise to English and Irish ports.

1901—UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour, owner.
Summer. Sailed from New York for a cruise in European waters, returning in October.

1901—IZTACCIHAUTI—Yawl, 46ft. l.w.l.; H. C. Tinker, owner.
Winter. Cruise to the Bahama Islands.

1902—ONWARD—Schooner, 102ft. l.w.l.; Edward Bell, owner.
A cruise from New York to West Indian waters.

1902—SURF—Steam yacht, 155ft. l.w.l.; C. K. G. Billings, owner.
A cruise in West Indian waters.

1902—Twenty-one schooners and fifteen sloops of the N. Y. Y. C. in a squadron run from Vineyard Haven to Provincetown, 80 knots at sea, N. Y. Y. C. cruise for cups. Won by schooners Constellation and Elmina; sloops Rainbow, Hester and Humma.

1902—TUSCARORA—Steam yacht, 170ft. l.w.l.; Walter Jennings,
Jan. owner.
A cruise from New York to West Indian waters.

1902—SEA FOX—Schooner, 89ft. l.w.l.; A. P. Stokes, owner;
Jan-Mar. A cruise in West Indian waters.

1902—VIRGINIA—Steam yacht, 165ft. l.w.l.; Larz Anderson,
Jan.-Apr. owner.
A cruise in West Indian waters.

1902—LADY TORFRIDA—Steam yacht, 160ft. l.w.l.; R. M.
Feb. Thompson, owner.
A cruise from England to New York via Azores, Cape de Verde and West Indian ports.

1902—MAY—Steam yacht, 203ft. l.w.l.; Alex. Van Rensselaer,
Feb.-Mar. owner.
A cruise in West Indian waters.

1902—ENDYMION—Schooner, 100ft. l.w.l.; Geo. Lauder, Jr.,
March. owner.
A cruise to the Bahamas.

1902—COLUMBIA—Steam yacht, 165ft. l.w.l.; J. Harvey Ladew,
March. owner.
Cleared for a cruise to the Mediterranean.

1902—MARGARITA—Steam yacht, 272ft. l.w.l.; C. B. Alexander,
Mar.-Apr. owner.
A Mediterranean cruise.

1902—ONORA—Steam yacht, 148ft. l.w.l.; A. C. Canfield, owner.
Mar.-Apr. A Mediterranean cruise.

1902—GOLDEN EAGLE—Steam yacht, 150ft. l.w.l.; Henry T.
Mar.-Apr. Sloane, owner.
A Mediterranean cruise.

1902—KATOOMBA—Steam yacht, 193ft. l.w.l.; Pliny Fisk, owner.
Mar.-Apr. A cruise in West Indian waters.

1902—KANAWHA—Steam yacht, 192ft. l.w.l.; H. H. Rogers,
Mar.-Apr. owner.
A cruise in West Indian waters.

1902—WANDERER—Steam yacht, 167ft. l.w.l.; C. L. F. Robin-
April 1. son, owner.
Arrived Constantinople.

1902—MARGARET—Steam yacht, 145ft. l.w.l.; I. E. Emerson,
April 4. owner.
Arrived Colombo from China.

1902—CORSAIR—Steam yacht, 254ft. l.w.l.; J. P. Morgan, owner.
April 15. Sailed from New York for a cruise to Mediterranean and Baltic waters.

1902—UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour, owner.
Apr.-Nov. A cruise in waters of northern Europe. From New York to New York.

1902—GENESEE—Auxiliary, 110ft. l.w.l.; J. S. Watson, owner.
May 2. Sailed from New York for English and Baltic ports.

1902—VIRGINIA—Steam yacht, 165ft. l.w.l.; I. Stern, owner.
May 2. Cleared from New York for Southampton and Kiel.

1902—ALVINA—Steam yacht, 177ft. l.w.l.; C. A. Griscom, owner.
June. Sailed from New York for English and Baltic ports. Returned in August.

1902—AMERICA—Aux. barque, 157ft. l.w.l.; Wm. Ziegler, owner.
Summer. Cruise to the Arctic Ocean.

1902—NAHMA—Steam yacht; Mrs. R. Goelet, owner.
July. VARUNA—Steam yacht; Eugene Higgins, owner.
JOSEPHINE—Steam yacht; P. A. B. Widener, owner.
MARGARITA—Steam yacht; J. Henry Smith, owner.
WANDERER—Steam yacht; Rear-Com. C. L. F. Robinson, owner.
CORSAIR—Steam yacht; J. P. Morgan, owner.
GENESEE—Auxiliary; J. S. Watson, owner.
NIAGARA—Steam yacht; Howard Gould, owner.
VIRGINIA—Steam yacht; I. Stern, owner.
COLUMBIA—Steam yacht; J. H. Ladew, owner.
CALANTHE—Steam yacht; J. H. Hinckley, owner.
UTOWANA—Auxiliary; A. V. Armour, owner.
ALVINA—Steam yacht; C. A. Griscom, owner.
New York Yacht Club yachts at Kiel, Germany, for the racing week, under command of Rear-Com. C. L. F. Robinson, N. Y. Y. C.

1902—FLEUR DE LYS—Schooner, 86ft. l.w.l.; Dr. L. A. Stim-
July-Aug. son, owner.
A cruise to Iceland and return.

1902—Eleven schooners and twelve sloops of the N. Y. Y. C. in
Aug. 9. a squadron run from Provincetown to Marblehead, 38 miles at sea.

1902—VALHALLA—Auxiliary, 239ft. l.w.l.; Earl of Crawford,
Aug. 18-21. owner.
UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour, owner.
ROSABELLE—Auxiliary, 136ft. l.w.l.; R. Ramage, owner.
SUNBEAM—Auxiliary, 154ft. l.w.l.; Lord Brassey, owner.
CZARINA—Auxiliary, 138ft. l.w.l.; Albert Brassey, owner.
An ocean auxiliary race under sail alone, Isle of Wight to Cherbourg Breakwater, thence to Eddystone Lighthouse, thence to Cowes, I. W. Won by Utowana, N. Y. Y. C.

1902—MARGARET—Steam yacht, 145ft. l.w.l.; I. E. Emerson,
Sept. 15. owner.
Arrived at New York from a cruise to China and Japan, 35,000 miles.

1902—GENESEE—Auxiliary, 110ft. l.w.l.; J. S. Watson, owner.
Sept. 22. Arrived in New York from a cruise in the Baltic Sea.

1902—NIAGARA—Steam yacht, 244ft. l.w.l.; Howard Gould,
Dec. 10 owner.
Sailed for a cruise to the Orient. Returned 1903.

1902—HILDEGARDE—Schooner, 106ft. l.w.l.; Edward R. Cole-
Winter. man, owner.
A cruise in West Indian waters.

1903—AMERICA—Auxiliary bark, 157ft. l.w.l.; Wm. Ziegler, owner.
Sailed on a North Polar expedition.

1903—COLUMBIA—Steam yacht, 165ft. l.w.l.; J. Harvey Ladew,
Jan. 17. owner.
Sailed for a cruise in West Indian waters, returning June 4.

1903—SULTANA—Auxiliary, 155ft. l.w.l.; A. C. Bostwick, owner.
Jan. 4. Sailed for a cruise to Bermuda and the Windward Islands.

1903—SHENANDOAH—Three-masted schooner, 100ft. l.w.l.;
Feb. Gibson Fahnestock, owner.
Cruised to the Bahamas, Porto Rico and St. Thomas.

1903—GENESEE—Auxiliary, 110ft. l.w.l.; J. S. Watson, owner.
Feb. Sailed for a cruise in West Indian waters.

1903—HILDEGARDE—Schooner, 103ft. l.w.l.; Edw. R. Coleman,
Feb. owner.
Sailed for a cruise in West Indian waters.

1903—MURIEL—Schooner, 70ft. l.w.l.; Chas. Smithers, owner.
Feb. 1. Sailed for a cruise in West Indian waters.

1903—ENDYMION—Schooner, 100ft. l.w.l.; Geo. Lauder, Jr.,
Feb. 15. owner.
Sailed for a cruise in West Indian waters.

1903—REVIERA—Steam yacht, 193ft. l.w.l.; Pliny Fisk, owner.
Feb. 18. Sailed for Norfolk, Va., for a cruise in the Mediterranean, returning May 26.

1903—SEA FOX.—Schooner, 90ft. l.w.l.; A. P. Stokes, owner.
Feb.-Apr. A cruise in West Indian waters.

1903—ISIS—Steam yacht, 164ft. l.w.l.; W. S. and J. T. Spaulding,
Feb.-Apr. owners.
A cruise in West Indian waters.

1903—TUSCARORA—Steam yacht, 170ft. l.w.l.; Walter Jen-
March. nings, owner.
Cruise to the Bahamas and West India Islands.

1903—ENTERPRISE—Auxiliary, 135ft. l.w.l.; F. L. Perin, owner.
March. Cruise to the Bahamas and West Indian waters.

1903—NARADA—Steam yacht, 194ft. l.w.l.; Vice-Com. Henry
March 1. Walters, N. Y. Y. C., owner.
Cruised South.

1903—MAY—Steam yacht, 203ft. l.w.l.; C. Ledyard Blair, owner.
March 2. Sailed for a cruise in West Indian waters.

1903—LYSISTRATA—Steam yacht, 285ft. l.w.l.; J. G. Bennett,
Mar.-May. owner.
A cruise from Nice, France, to the West India Islands and return.

1903—CATANIA—Steam yacht, 193ft. l.w.l.; S. Barton French,
Apr. owner.
A cruise from England to Mediterranean ports.

1903—ARCTURUS—Auxiliary, 135ft. l.w.l.; R. Stuyvesant, owner.
April 6-16. Crossed, Southampton to New York.

1903—GUNHILDA—Steam yacht, 166ft. l.w.l.; W. L. Harkness,
Apr.-May. owner.
A cruise in West Indian waters.

1903—NORTH STAR—Steam yacht, 219ft. l.w.l.; Rear-Com. C.
Apr.-Aug. Vanderbilt, N. Y. Y. C., owner.
A cruise in the Mediterranean and the Baltic, returning to New York.

1903—FAUVETTE—Steam yacht, 160ft. l.w.l.; Robt. Bacon,
Spring. owner.
A cruise in the West Indies.

1903—APHRODITE—Steam yacht, 260ft. l.w.l.; Oliver H. Payne,
May-Sept. owner.
A cruise to English and Baltic ports.

1903—UTOWANA—Auxiliary, 155ft. l.w.l.; A. V. Armour, owner.
June-Oct. A cruise in European waters, New York to New York.

1903—MARGARITA—Steam yacht, 272ft. l.w.l.; J. Henry Smith,
July owner.
A cruise from England to Baltic ports.

1903—MARGARITA—272ft. l.w.l.; J. H. Smith, owner.
July. NORTH STAR—219ft. l.w.l.; Rear-Com. C. Vanderbilt, N. Y. Y. C., owner.
NAHMA—275ft. l.w.l.; Mrs. R. Goelet, owner.
UTOWANA—155ft. l.w.l.; A. V. Armour, owner.
LYGIA—57ft. l.w.l.; Alfred Scheitlin, owner.
N. Y. Y. C. yachts at Kiel, Germany, for the racing week, under command of Rear-Com. Cornelius Vanderbilt, N. Y. Y. C.

1903—VARUNA—Steam yacht, 260ft. l.w.l.; Eugene Higgins,
Oct. 25. owner.
Sailed for the Mediterranean, her sixteenth voyage across the Atlantic.

1903—SAFA-EL-BAHR—Steam yacht, 210ft. l.w.l.; F. L. Leland,
Nov. 17. owner.
Sailed for a cruise in the Mediterranean.

1903—VERGEMERE—Auxiliary, 120ft. l.w.l.; A. C. Bostwick,
Dec. 20. owner.
Sailed for a cruise to the Mediterranean via Bermuda and Madeira.

RACES OVER OCEAN COURSES OFF THE COAST OF THE UNITED STATES BY YACHTS OF THE NEW YORK YACHT CLUB.

1846—MARIA—Sloop, 154 tons; J. C. Stevens, owner.
COQUETTE—Schooner, 74 tons; J. H. Perkins, owner.
Twenty-five miles to sea from Sandy Hook and return.
A match race. Won by Coquette.

1851—CORNELIA—Schooner, 56 tons; William Edgar, owner.
MARIA—Sloop, 154 tons; J. C. Stevens, owner.
AMERICA—Schooner, 170 tons; J. C. Stevens, et al., owners.
Trial at sea. Twenty miles to sea and return from Sandy Hook.

1865—MAGIC—Schooner, 113 tons; W. H. McVicker, owner.
JOSEPHINE—Schooner, 143 tons; Daniel Devlin, owner.
Race 15 miles to windward and return from Sandy Hook. Won by Magic.

1866—L'HIRONDELLE—Schooner, 262 tons; S. Dexter Bradford, owner.
VESTA—Schooner, 201 tons; Pierre Lorillard, Jr., owner.
Match race, 20 miles from Sandy Hook Lightship and return. Won by L'Hirondelle.

1866—L'HIRONDELLE—Schooner, 262 tons; S. Dexter Bradford, owner.
PALMER—Schooner, 194 tons; R. F. Loper, owner.
Twenty miles to windward and return from Sandy Hook Lightship.

1870—DAUNTLESS—Schooner, 268 tons; J. G. Bennett, Jr.,
Oct. owner.
CAMBRIA—Schooner, 227 tons; James Ashbury, owner.
Match race, False Hook, 20 miles to sea and return. Won by Dauntless.

1870—SAPPHO—Schooner, 274 tons; W. P. Douglas, owner.
Oct. CAMBRIA—Schooner, 227 tons; James Ashbury, owner.
13. Match race, Sandy Hook L. V., 20 miles to sea and return. Sappho led to finish. Race not made in agreed time of five hours.

1871—LIVONIA—Schooner 2512 area; James Ashbury, owner.
Oct. DAUNTLESS—Schooner, 2899 area; J. G. Bennett, Jr.,
24. owner.
Match race from Sandy Hook L. V., 20 miles to sea and return. Won by Dauntless.

1870—SAPPHO—Schooner, 274 tons; W. P. Douglas, owner.
Oct. DAUNTLESS—Schooner, 268 tons; J. G. Bennett, Jr.,
25. owner.
Match race from Sandy Hook Lightship, 25 miles to sea and return. Won by Sappho.

1871—DAUNTLESS—Schooner, 7124ft. displacement; J. G. Ben-
Oct. nett, Jr., owner.
DREADNAUGHT—Schooner, 6178ft. displacement; S. Samuels, owner.
Match from Sandy Hook Lightship, 20 miles to sea and return. Won by Dauntless.

1871—SAPPHO—Schooner, 7747ft. displacement; Wm. P. Doug-
Oct. 28. las, owner.
DREADNAUGHT—Schooner, 6178ft. displacement; S. Samuels, owner.
Match; from Sandy Hook Light Vessel, 20 miles to sea and return. Won by Sappho.

1875—MOHAWK—Schooner, 346 tons; W. T. Garner, owner.
Oct. DAUNTLESS—Schooner, 267 tons; J. G. Bennett, owner.
30. Match race; 20 miles from Sandy Hook Lightship to sea and return. Won by Dauntless.

1878—GRACIE—Sloop, 70ft. l.w.l.; J. R. Waller, owner.
Oct. VISION—Sloop, 66ft. l.w.l.; J. J. Alexander, owner.
18. Match race, 20 miles to sea and return from Sandy Hook Lightship. Won by Gracie.

1883—BEDOUIN—Cutter, 70ft. l.w.l.; A. Rogers, owner.
Oct. GRACIE—Sloop, 70ft. l.w.l.; Flint & Earle, owners.
Match race for the Bennett cup, 20 miles to sea and return from Sandy Hook. Won by Bedouin.

1662—FANNY—Sloop, 66ft. l.w.l.; Prince & Whitney, owners.
Oct. 9. GRACIE—Sloop, 70ft. l.w.l.; Flint & Earle, owners. Match race, 20 miles to sea and return from Sandy Hook. Won by Fanny.

RACES FOR THE AMERICA'S CUP SAILED OVER OCEAN COURSES OFF SANDY HOOK.

1871—COLUMBIA—Schooner; Rear-Com. Franklin Osgood, N. Y. Y. C., owner.
Oct. 18. LIVONIA—Schooner; James Ashbury, R. H. Y. C., owner.
From Sandy Hook Lightship, 20 miles to windward and return. Won by Columbia.

1871—SAPPHO—Schooner; W. P. Douglas, N. Y. Y. C., owner.
Oct. 21. LIVONIA—Schooner; James Ashbury, R. H. Y. C., owner.
From Sandy Hook Lightship, 20 miles to windward and return. Won by Sappho.

1876—MADELINE—Schooner; John S. Dickerson, N. Y. Y. C., owner.
Aug. 12. COUNTESS OF DUFFERIN—Schooner; J. Ashbury, N. Y. Y. C., owner.
From buoys off Sandy Hook, 20 miles to sea and return. Won by Madeline.

1881—MISCHIEF—Sloop; J. R. Busk, N. Y. Y. C., owner.
Nov. 10. ATALANTA—Sloop, Alex. Cuthbert, owner.
From buoys off Sandy Hook, 16 miles to leeward and return. Won by Mischief.

1885—PURITAN—Sloop; J. M. Forbes, N. Y. Y. C., owner.
Sept. 16. GENESTA—Cutter; Sir R. Sutton, Bart, R. Y. S., owner.
From Scotland Lightship, 20 miles to leeward and return. Won by Puritan.

1886—MAYFLOWER—Sloop; Gen. C. J. Paine, N. Y. Y. C., owner.
Sept. GALATEA—Cutter, Wm. Henn, R. N. Y. C., owner.
From Scotland Lightship, 20 miles to leeward and return. Won by Mayflower.

1887—VOLUNTEER—Sloop; Gen, C. J. Paine, N. Y. Y. C., owner.
Sep. THISTLE—Cutter, Jas. Bell, R. C. Y. C., owner.
From Scotland Lightship, 20 miles to windward and return. Won by Volunteer.

1893—VIGILANT—Sloop; C. Oliver Iselin, N. Y. Y. C.
Oct. 7. VALKYRIE II.—Cutter; The Earl of Dunraven, R. Y. S.
From Sandy Hook Light Vessel, 15 miles to leeward and return.

Oct. 9. VIGILANT—Sloop; C. Oliver Iselin, N. Y. Y. C.
VALKYRIE II.—Cutter; The Earl of Dunraven, R. Y. S.
From Sandy Hook Light Vessel, a triangle of 10-mile sides.

Oct. 12. VIGILANT—Sloop; C. Oliver Iselin, N. Y. Y. C.
VALKYRIE II.—Cutter; The Earl of Dunraven, R. Y. S.
From Sandy Hook Light Vessel, 15 miles to windward and return.
All three races won by Vigilant.

1895—DEFENDER—C. Oliver Iselin, N. Y. Y. C.
Sept. 7. VALKYRIE III.—The Earl of Dunraven, R. Y. S.
From a mark near Seabright, N. J., 15 miles to windward and return.

Sept. 10. DEFENDER—C. Oliver Iselin, N. Y. Y. C.
VALKYRIE III.—The Earl of Dunraven, R. Y. S.
From Sandy Hook Lightship, a triangle of 10-mile legs.

Sept. 12. DEFENDER—C. Oliver Iselin, N. Y. Y. C.
VALKYRIE III.—The Earl of Dunraven, R. Y. S.
From Sandy Hook Light Vessel, 15 miles to windward and return.
All three races won by Defender.

1899—COLUMBIA—C. Oliver Iselin, N. Y. Y. C.
Oct. 16. SHAMROCK I.—Sir Thomas J. Lipton, R. U. Y. C.
From Sandy Hook Lightship, 15 miles to windward and return.

Oct. 17. COLUMBIA—C. Oliver Iselin, N. Y. Y. C.
SHAMROCK I.—Sir Thomas J. Lipton, R. U. Y. C.
From Sandy Hook Lightship, a triangle of 10-mile legs.

Oct. 20. COLUMBIA—C. Oliver Iselin, N. Y. Y. C.
SHAMROCK I.—Sir Thomas J. Lipton, R. U. Y. C.
From Sandy Hook Lightship, 15 miles to leeward and return.
All three races won by Columbia.

1901—COLUMBIA—E. D. Morgan, N. Y. Y. C.
Sept. 28. SHAMROCK II.—Sir Thomas J. Lipton, R. U. Y. C.
From Sandy Hook Light Vessel, 15 miles to windward and return.

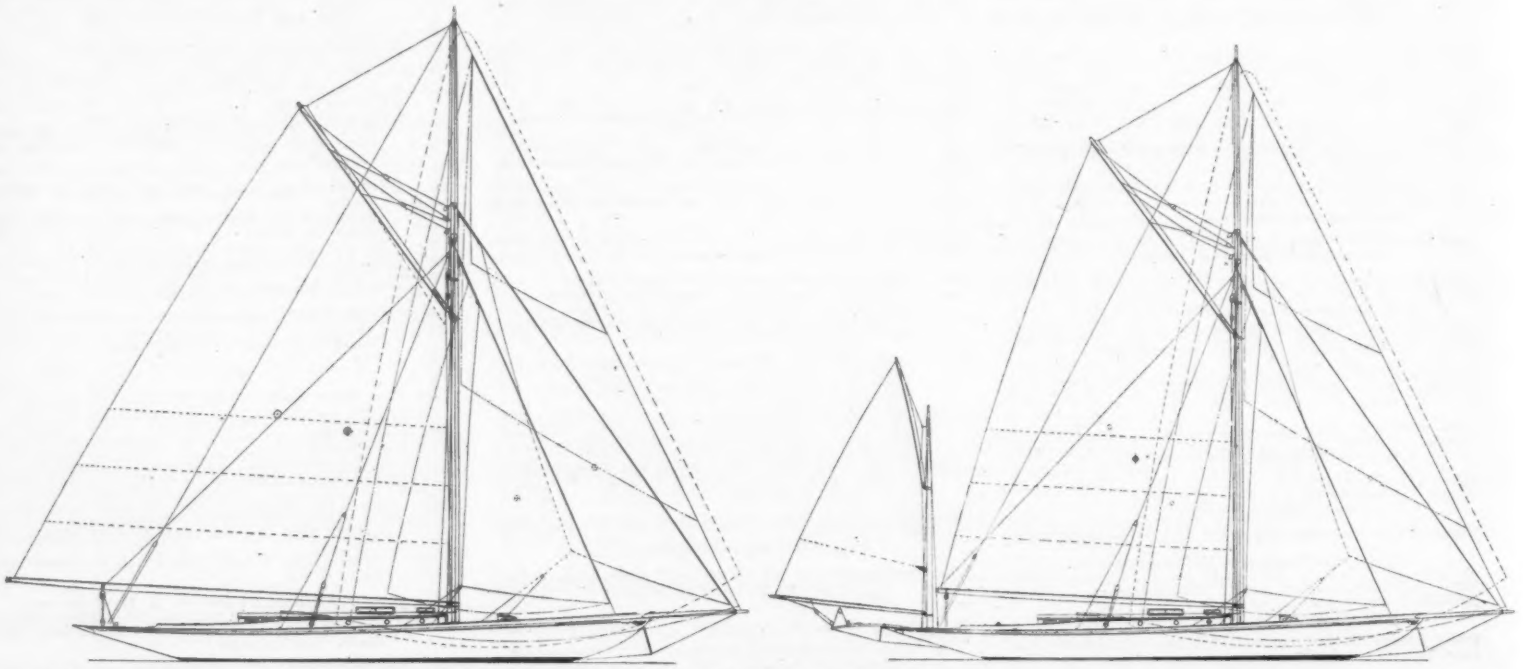
Oct. 3. COLUMBIA—E. D. Morgan, N. Y. Y. C.
SHAMROCK II.—Sir Thomas J. Lipton, R. U. Y. C.
From Sandy Hook Light Vessel, a triangle 10-mile legs.

Oct. 4. COLUMBIA—E. D. Morgan, N. Y. Y. C.
SHAMROCK II.—Sir Thomas J. Lipton, R. U. Y. C.
From Sandy Hook Light Vessel, 15 miles to leeward and return.
Columbia won all three races.

1903—RELIANCE—C. Oliver Iselin, N. Y. Y. C.
Aug. SHAMROCK III.—Sir Thomas J. Lipton, Bart, R. U. Y. C.
From a point near Sandy Hook Light Vessel, 15 miles to windward and return.

Aug. 25. RELIANCE—C. Oliver Iselin, N. Y. Y. C.
SHAMROCK III.—Sir Thomas J. Lipton, Bart, R. U. Y. C.
From Sandy Hook Light Vessel, a triangular course, 10-mile legs.

Sept. 2. RELIANCE—C. Oliver Iselin, N. Y. Y. C.
SHAMROCK III.—Sir Thomas J. Lipton, Bart. R. U. Y. C.
From Sandy Hook Light Vessel, 15 miles to windward and return.
Reliance won all three races.



DESIGNING COMPETITION—FIRST PRIZE DESIGN—SUBMITTED BY CHARLES D. MOWER, NEW YORK CITY—PLANS OF SLOOP AND YAWL RIGS.

Designing Competition.

First Prize Design.

WE publish herewith the design which received first prize in our recent competition for a centerboard cruising boat of 40 ft. waterline. The design was submitted by Mr. Charles D. Mower, of New York city. Mr. Mower has turned out many fine boats, but to our mind this design for a 40-footer surpasses any of his previous work. The design is admirable in every respect and a boat built from it would prove as fine an all around cruiser as could be produced.

The cabin arrangement impressed us as being most unique and practical. Mr. Mower did not attempt to crowd too much into the internal space. All the quarters are well arranged and large enough to be most livable. The separate steerage, the large after cabin, the airy saloon and galley running the full width of the boat, are features which immediately recommend themselves.

It was an open question how the yawl and the sloop rigs would work out, as in both cases the mast had to remain in the same position. The ready and practical way Mr. Mower overcame this apparent obstacle demonstrated that it was no great objection. Both his sail plans are handsome and well balanced.

The following descriptive matter accompanied Mr. Mower's design, and as it gives a good idea of what he had in mind when getting out the boat's plans we publish it:

General Description.

Cabin.—In working out this design the chief aim has been to produce a boat on which four men could take an ordinary cruise with every comfort and convenience, but at the same time especial attention has been given to arranging the space below deck so that the owner, with perhaps a friend, could live on board for the entire season in comfortable quarters with plenty of "elbow room."

The arrangement on deck is somewhat novel, and will be spoken of later. The companion stairs, which make passage below much easier than the usual steep ladder, land in a steerage between main cabin and stateroom, and cut off from each by doors, an undeniable advantage for bad weather and general cruising work. The toilet room is on the port side, opening from the steerage, with a sliding door. This has a set wash basin and regular yacht closet. The location of the toilet room makes it accessible from either cabin or stateroom, which is an advantage at night, especially in case the after state room is given up to ladies. Besides, its convenient location as regards the stateroom and cabin, the toilet can be reached from on deck without disturbing those who are sleeping below.

On the starboard side, a large locker opens from the stairway for oilers, rubber boots, etc.

The main cabin is 9ft. 6in. long, and has the usual arrangement of transoms, berths, lockers, sideboards, and also a desk, which is almost necessary where the owner lives on board.

Space is shown for a yacht stove for late fall cruising. The double stateroom aft has full headroom over its floor space, and the cabin trunk is fitted on three sides with large square windows, insuring plenty of air and good ventilation. The stateroom aft has two extra wide berths, large clothes lockers, a bureau with large drawers and two sofas. Under the stairs is a large locker for stowing suit cases, kit bags, etc.

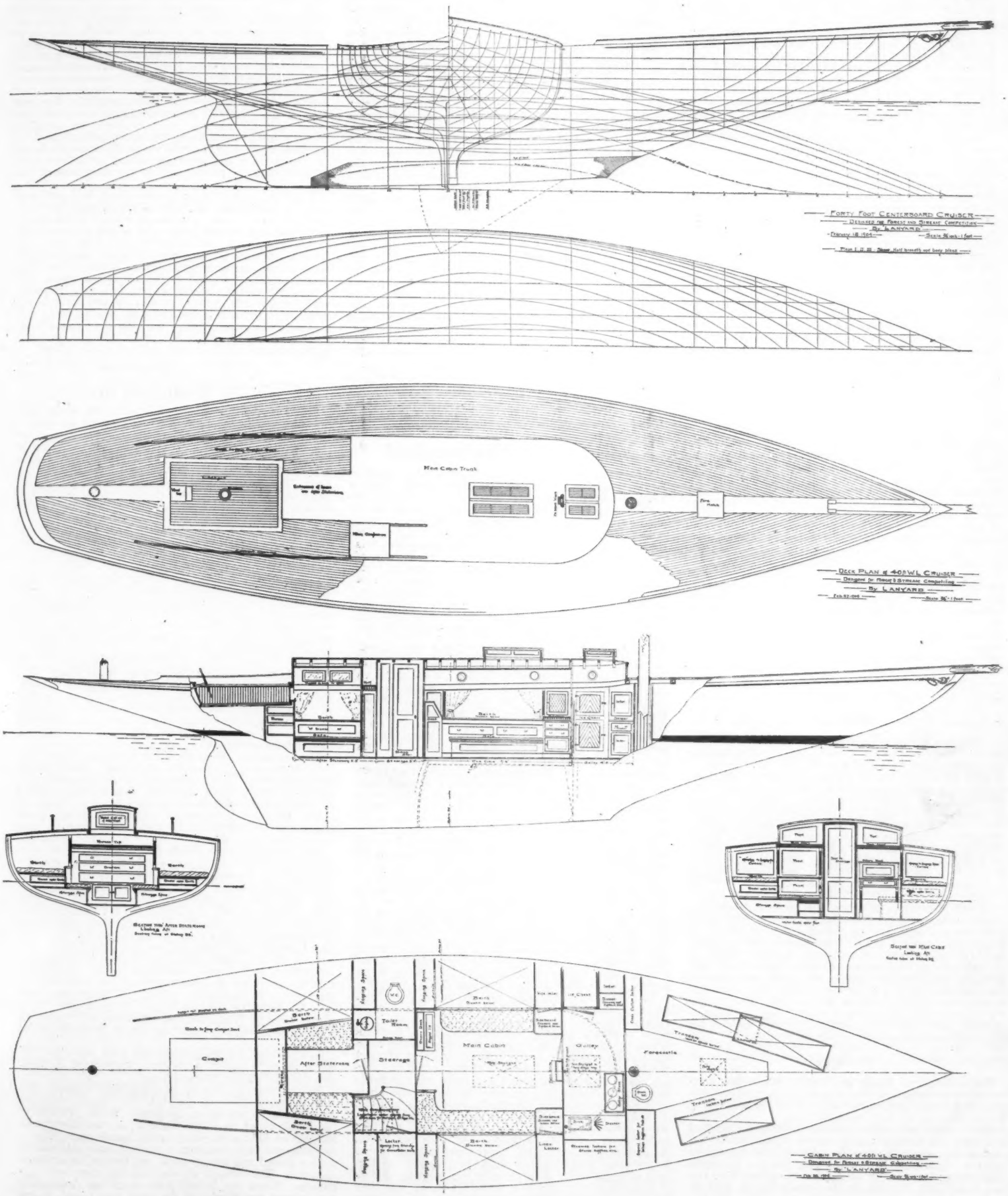
The galley is unusually large, as it is essential that the steward should be able to cook and prepare food without the inconvenience of cramped quarters. The forecastle is entirely apart from the galley, another desirable feature, and has ample room for three hanging pipe berths, for sailing master, steward and one hand. The advantages of the arrangement are the double stateroom aft, companionway landing in steerage, large main cabin, and ample space for working part forward.

Design.—The design is moderate in every feature, the overhangs, while long enough for appearance sake, are fine and sharp in section, and should not prove objectionable; the lateral plane is not cut away, and the long, straight keel makes a boat steady on her helm and facilitates docking. The midship section shows a full bilge, with power enough to make the boat carry sail well at a small angle of heel. The centerboard below the cabin floor gives sufficient draft for good windward work, while the boat will handle well in shallow waters without board.

Rig.—The rig has been purposely kept small, so that the boat may be easily handled by a small crew, the sail being both low and well inboard. The yawl rig shows the same mainmast and head rig, and the same gaff as in sloop rig, the main boom being shortened and the mizzen placed to preserve the same balance.

Dimensions.

Length—	
Over all	60ft. 9 in.
Waterline	40ft.
Overhang—	
Forward	9ft. 1½in.
Aft	11ft. 7½in.
Beam—	
Extreme	14ft. 11 in.
Draft—	
Extreme	5ft. 11½in.
Board down	10ft. 2 in.
Freeboard—	
Bow	4ft. 9 in.
Stern	3ft. 5 in.
Least	3ft.
Displacement	48,883 lbs.
Lead keel	18,109 lbs.
Trimming ballast (inside), about	2,000 lbs.
Area—	
Mainsail, sloop	1,380 sq. ft.
Mainsail, yawl	1,041 sq. ft.
Mizzen	250 sq. ft.
Jib	237 sq. ft.
Fore staysail	233 sq. ft.
Total—	
Sloop rig	1,850 sq. ft.
Yawl rig	1,761 sq. ft.
C.L.R. from fore end L.W.L.	23.3ft.
C.E.S. from fore end L.W.L. (sloop)	22.7ft.
C.B. from fore end L.W.L.	21.4ft.
C.Gravity, lead, from fore end L.W.L.	22.2ft.



DESIGNING COMPETITION—FIRST PRIZE DESIGN—SUBMITTED BY CHARLES D. MOWER, NEW YORK CITY—LINES, DECK AND CABIN PLANS.

Gas Engines and Launches.

BY F. K. GRAIN.

(*Continued from page 195.*)

Lubricators.

LUBRICATOS usually employed are for the shaft bearings, a compression grease cup. By screwing down on these grease cups the grease is forced into the bearing, or should the bearings become overheated the greases will flow naturally to the bearing. The reason that oil cups are not employed on this part of the engine is that there is always more or less and generally sufficient oil force from the crank case of the engine through the bearings resulting from the crank case compression. Again, on the other hand, should the bearings wear after a time sufficiently to allow the gas to escape through them from the crank case, it may be in a great measure stopped by forcing the grease around the bearing.

Up until quite recently the crank pin has been lubricated by putting sufficient oil into the crank case to allow the crank to dip at every revolution. This, however, has always been a very uncertain method, it being very diffcult to gauge the right amount of oil to use. Should an over supply be put into the crank case, the crank will, in revolving, dash the oil up and into the gas inlet port, whence it will pass to the cylinder and cause trouble. There are two methods now in use which have proved very good, and are practically doing away with this trouble. The first method is to bore out the crank shaft from the front end through to an opening in the wrist pin, placing a grease cup on the end of the crank shaft. By this means the grease can be forced directly to the crank pin bearing. Another method is to make the connecting rod hollow, also the wrist pin passing through the piston, this opening comes in alignment with the grease cup running into the cylinder at a point which makes the two openings coincide when the engine is on the lower center.

The engine is then turned to that point before starting, the grease cup being compressed, its contents is then forced through and down into the connecting rod, and if the connecting rod is of sufficient size, one filling will suffice for a week or two.

The last, but most important lubrication, barring, of course, the small moving parts of the igniter and pump, is the cylinder. This is accomplished by means of an ordinary sight feed lubricator, which can be adjusted to feed any number of drops per minute and visible to the operator. The point in the cylinder at which the lubrication should enter is close to the top of the piston when it is on its lower center, and the piston should be of sufficient length so that this opening will always be covered. If the opening is above the top of the piston, it will get the back pressure from the cylinder and will not only be very wasteful of the lubricant but make the feeding uncertain and irregular. It is usual in all lubricators to place a small ball check on the bottom of the lubricator to prevent any back pressure from the cylinder. A small pressure tube leads up and above the oil level in order to bring the pressure, if any, above the oil. Another lubricator much in use has a large, tight fitting plunger, which is forced against the oil by means of a heavy spring; this makes an absolutely positive force feed and is an excellent method for lubricating with heavy oil when the temperature is sufficiently low to thicken the average cylinder oil.

Mufflers.

There was a time when people objected very strongly to the noise made by the exhaust, and in order to deaden this noise a device called a muffler has been in use for a time by all the engine builders. These mufflers on a general principle consist of an enlarged chamber containing perforated disc baffle plates or pipes. The idea being to make the muffler sufficiently large to allow the exhaust gas to expand and then escape at a steady pressure through the various small openings. In the last few years the public have become more accustomed, especially since the advent of the automobile, to these noises, with the consequence that the tendency now is to do away with the muffler as much as possible. While a muffler can be designed which will make the engine perfectly noiseless, with the new design of modern short stroke engine working at high compression and high speed, it is difficult to design a muffler which will be noiseless and yet not be too expensive and so large as to take up valuable room and add weight. Again, on the other hand, we have an objection found in all mufflers, in this that they retain the heat from the exhaust gasses, and in a great many cases their proximity is very objectionable on that account, the tendency being to make all exhaust pipes as short and as large as possible with a minimum amount of muffling and get rid of the exhaust gas as quickly as possible.

Reversing.

The reversing of marine gas engines has probably received more attention than any other part of the engine, and we are still to-day as far from the solution of this problem as we were ten years ago.

On the two-cycle engine there is one, and one method only, and this is reversing by means of the spark. To explain this we will have to take up the subject of ignition. Quite the contrary to the practice in steam engineering, the time of ignition, commonly called the lead, must take place before the engine has reached its upper center. The amount of lead necessary to get the best results of course depending upon the speed of the engine, the weight of the fly wheel and amount of compression. It is safe, however, to assume that the highest point of efficiency on the average small engine is had by igniting at a little over seven-eighths of the up stroke. The idea of igniting the mixture before it reaches the upper center, is that from the time of sparking, until the gas is ignited to its full capacity, the engine has reached its upper center and therefore gets the full benefit of expansion. Now we will suppose that the engine is turned around slowly by hand, the lead of the igniter being set as stated; in this case the engine would kick back or reverse, and gathering force, would overcome the lead in the opposite direction and keep running on the reversed motion. We will now assume that the eccentric working the igniter is set on the dead center, in other words, true to the crank shaft; in this way the action of the sparker would be the same when the engine is turned in either direction, and it will run equally well with the same power in either direction.

Now, supposing that we wish to reverse, we will throw off our switch, cutting out the electric current. This will cause the engine to slow down. When the momentum is reduced to almost the stopping point, we then thrown in the switch, and when the engine ignites against the lead as described, it will reverse and run in the opposite direction. This method of reversing is by no means infallible, and depends to a great extent upon the skill and practice of the operator, and not only this but when a boat is running at high speed, this operation can very seldom be performed, as the momentum of the boat will keep the propeller revolving and of course exerting that much additional power against the engine. This same operation is in some engines performed by means of a link motion with an insulated cut-out. The object of this being to overcome the plan of setting the eccentric off the center, in order to make the ignition directly on the center to avoid any possible back kicks in starting and, of course, under these circumstances a link motion is necessary in order to adjust the lead when the engine is reversed. This plan, although a very good talking point, adds a number of expensive parts to the engine, and really does not accomplish any better results. There are a number of clutches, gear boxes, and other devices in use, by means of which the shaft is reversed. While some of these devices accomplish the object sought for they are not considered a great success on small engines, as they are not only cumbersome but expensive and require considerable care and careful adjustment, and manufacturers in general decline to recommend them. We think we have now given a clear idea of the two-cycle engine with the exception of the sparking mechanisms, and as this part of the engine performs the same functions and is identical on both two and four-cycle, the explanation will answer for both.

[TO BE CONTINUED.]

Yachting in Newfoundland.

NEWFOUNDLAND, although only about 317 miles in length, has a coast line of over 2,000 miles. This is explained by the fact that its whole shore line is indented with magnificent bays, anywhere from ten to ninety miles deep. For those who love smooth water sailing, and at the same time who enjoy the bracing sea air, and beautiful and ever-varying scenery, a cruise up one of those fiords leaves nothing to be desired. Take, for instance, Notre Dame Bay. It has an archipelago of hundreds of clustering islets, many of them inhabited, and containing fine harbors. The runs and passages are navigable for large steamers, and are used by cargo boats to go to at least one mining town, viz., Pilley's Island, where they load large cargoes of iron pyrites for foreign markets.

These runs between the islands furnish ideal "sailing on the summer seas." The scenery is bold and grand, and ever-changing; the water is like oil; the air in the summer months is balmy and health-giving, and for the yachting party who has a few weeks to dawdle amid pleasant scenes, no place offers greater attractions than these bays. There are over a dozen ports of call, each possessing a different attraction for the stranger. If the traveler wants rest, this is the lotus land. If he wants fishing, he is within easy reach of numbers of salmon and sea trout streams, not to mention ponds and lakes where ordinary spotted trout abound. If he is of an inquiring turn of mind, he can see one of the very best mineral belts in North America. Felt Cove Copper Mine has been working for years, and it is just as profitable to-day as ever. Felt Cove is worth a visit. It is set between cliffs. The town is built all around a small lake, which is at the bottom of the basin.

A ship must be moored at the pier nearly before a glimpse of the town can be had. A narrow tramway between the high hills leads into the foot of the lake, and when you follow that for a few yards from the pier, the pretty little town, nestling at the foot of the hills and surrounding the lake, bursts on your view. The lake looks like a diamond in its setting of highly mineralized hills. Just beyond the tramway rises, and a procession of cars comes and goes, by means of an endless chain; the full ones running down the incline from the mouth of the mine, and the empty ones being drawn to the top of the incline. The pyrites mine, at Pilley's Island is another curiosity, for anyone interested in minerals, and in fact an inspection of the mine would be an attraction for any ordinary traveler looking for experiences. Besides, the passage up through the islands to Pilley's Island is almost worth the voyage. The ship runs through a narrow strait between the islets, with the land on either hand near enough to pitch a pebble on shore. Suddenly the strait is blocked; the ship is in a veritable *cul de sac*. The ordinary observer sees nothing ahead but to dash into the land at her bows; suddenly a turn of the helm and lo! on the port or starboard hand the channel suddenly opens before you. Just ahead, perhaps, you see the top rigging of a schooner. It appears to rise from the middle of a small island; the ship rounds a point and here before him is a miniature harbor with the schooner moored nearly against the front door of a little cottage, making a picture resembling a highly fanciful Christmas card.

Little Bay is another mining settlement. Some of the best copper in America was found here. It was shipped in large quantities for years, but through some mismanagement it was shut down. It is now filled with water, and the work has been discontinued. To add to the miseries of Little Bay it was devastated by fire. It has now only a remnant of its former greatness. Yet those of its inhabitants who profess to know, say that the mine is only waiting for the right man to make it boom better than ever, as the copper is there in sufficient quantities to repay any outlay. Hall's Bay is a very deep inlet, its wooded shores nearly within reach of the deck as the yacht sails up. In the bottom of the bay empties one of the best salmon and trout streams in the island. Then there are the South West Arm, Exploits Bay, Badger Bay and Pander Bay, all deep fiords, going for miles into the land. The Exploits and Pander Rivers are probably the best salmon streams in America, and are navigable for small craft for many miles. There are other little towns and harbors that would well repay a visit. The inhabitants are kindly and hospitable, and as yet are unspoiled by too much traffic with the outer barbarians. The same holds good of several other bays. The beauty and variety of the scenery equal if not surpass, the much vaunted charms of Norway; at least this is the verdict of travelers who have seen both. The advantages for American yachtsmen are altogether in favor of Newfoundland. The distance is not nearly so great, so that in matter of time alone, half the summer holidays might be saved by running up to one of the great Newfoundland bays. It would not take half the time to get there that it would to Norway, and the latter place does not offer a tithe of the attraction to the angler, the sportsmen or the naturalist.

If the yachtsman had a camera along, he'd get many valuable souvenirs. Apart from the scenery, he could get at Snooks' Arm pictures of whales in all stages, from the monster just harpooned to the carcass in the various stages of preparation for oil, bone, and commercial fertilizer. There are waterfalls, large enough to generate electricity sufficient to supply New York with motive power, and there are tiny cascades, just fit for picnicking. In line, if you seek rest or sport; food for the rod, gun, or kodak; if you want health or pleasure or variety, and the same time to enjoy sailing on summer seas, you cannot do better than steer your bark for Newfoundland, and make your headquarters in one of the celebrated bays of the island.

W. J. C.

St. Paul Letter.

ST. PAUL, April 16.—Interest is increasing in the coming contest with Montreal, and the prospect for quite a number of extra boats for the preliminary trial races for this event is very bright. It is hoped that there will be five or six contestants for the White Bear trial, and probably nearly as many more for the trial to be held at Oshkosh. The committee appointed for the choosing, building and management of the challengers has decided to build a fourth boat. This boat is to be a sharp-nosed scow about 38ft. over all and of good breadth. She will be designed by Dr. J. M. Welch, who is an old member of the White Bear Y. C., and will probably be sailed in the preliminary trial races by her designer. She will be built by the Dingle Boat Co., in West St. Paul, under the supervision of Dr. Welch. Mr. Dingle was one of the first men who designed and built boats for White Bear, but for the last five years has given his attention entirely to power boats. The racing committee is seriously considering building a fifth boat from Messrs. Burgess and Packard's plans. This boat will have lots of beam and will not be very long over all.

There is to be a boat from Lake Minnetonka in the Seawanhaka cup trials to be held at White Bear. This boat is designed and built by "Ande" Peterson, of Lake Minnetonka, for the Louden Brothers. Up to the last two or three years Mr. Peterson designed and built some of the fastest small boats in the country. This boat will be a pointed-nose scow, about 38ft. over all, and will have a moderate beam.

For the last four years the Minnetonka men have taken little interest in sailing, and it is pleasing to see that they are beginning to wake up again. There are some fine sailors at Minnetonka, and they should make a good showing in the Seawanhaka cup trials.

The Minnetonka people are buying a number of old boats from White Bear this spring and hope to start racing again as of old.

Gus Amundson built a class "A" boat toward the close of last summer that was not put in the water, and this boat will be entered in the Seawanhaka trials by the Frye Brothers, of St. Paul. It is a blunt-nosed scow, 38ft. long and, like all of Amundson's boats, has easy lines. This boat ought to make a good showing, especially in light weather. Besides the Seawanhaka challenger, Amundson has built a class "A" boat for one of the inland lakes of New York, and one for Long Island. Mr. Lyford, of Fox Lake, has ordered an "A" boat from Amundson, and he will undoubtedly enter her in the Inland Lake races at Oshkosh, which are to be held in the latter part of August. Three "B" boats have been built by Amundson, two of which will go to one of the inland lakes of Wisconsin, and the other will remain on White Bear, the property of the Owens Brothers, of St. Paul.

J. E. Ramaly, of White Bear, has built two class "B" boats, one to be owned by the Read Brothers, of St. Paul, and the other by the Ordway boys.

Perhaps it would be a good idea to give a general history and description of the class "B," which class has grown to be so popular in the West. When, previous to the formation of the Inland Lake Y. A., the Minnetonka and White Bear clubs were having match races, first at one lake and then the other, a class of boats was started with a limited sail area of 350ft. and the racing length of 17.5 feet. The weight allowed for the crew was 450 pounds. When the Inland Lake Yachting Association was started the weight of the crew was raised to 500 pounds. The class at present is very similar to the large class, rules for which were adopted several years ago and are exactly the same as those used in the international races for the Seawanhaka Cup at Montreal. Practically the only restriction is in sail area and there is no time allowance. The designer can build a long beoat or a short boat, with whatever power he sees fit, the scantling rules are the same as in the class "A," sail area of class "B" boats is 350ft. of standing sail, with spinnaker and flying jib in addition.

Then length over all is limited to 32ft, with no limit to the waterline length. This class has grown so in

popularity and is so large on White Bear at the present time that boats have to be divided into two divisions. The first division consists of new boats, built every year, and the second sonsists of the old boats that have been raced the previous seasons. There will be at least twelve new boats this year and about eight last year's boats giving fully as large classes as can satisfactorily be handled. Besides two cups in each class there is a special cup offered each year for the championship; also a cup for points.

These boats are almost entirely sailed by sons of the members of the club, and are in many respects more adapted for pleasure sailing than the large boats. They are almost as fast, not so hard to handle and do not require as large a crew.

In several cases last year "B" class made the eight-knot course in less than one hour and fifteen minutes. In all there are something like thirty-five A and B sailboats being built at White Bear, most of which are almost completed.

A number of new launches, designed and built by J. E. Ramaly for men living at White Bear, will be added to the power fleet this season, and there is some talk of launch racing this summer. JACK ORDWAY.

YACHTING NEWS NOTES.

For advertising relating to this department see pages ii and iii.

COBWEB Y. C. ELECTS OFFICERS.—At a recent meeting of the Cobweb Y. C., held at the club house, foot of West 152d street, North River, New York city, the following officers were elected: Com., Philp Grauer; Vice-Com., John H. W. Fleming; Fleet Captain, Wm. Ridley; Recording Secretary, Donald Manson; Financial Secretary, Charles Broughton; Treasurer, John Homan; Measurer, Fred Gegges; Fleet Surgeon, D. Garrick; Trustees, C. H. Madden, Edw. Fox, A. Feldhus, Chas. Demand, Wm. Houston, H. R. Halsey; Regatta Committee, John H. W. Fleming, Wm. Ridley, D. Manson.

The regatta committee has arranged for the following open races: May 30, Monday, spring regatta; Sept. 5, fall regatta.

SUNBEAM PURCHASED BY EX-MAYOR LOW.—Mr. J. L. Hutchinson, Morristown, N. J., has sold the steam yacht Sunbeam to ex-Mayor Low, through the agency of Mr. Stanley M. Seaman, New York. Sunbeam has a recorded speed of 19.2 miles. She is a double-planked mahogany boat, 60ft. over all, 8ft. 6in. beam and 3ft. 6in. draft, built 1903, by the Herreshoff Mfg. Co.

BAY VIEW Y. C. ELECTION.—The Bay View Y. C. held its annaul meeting on April 12 and the following officers were elected: Com., Edward R. Karutz; Vice-Com., J. Fred Borghard, Jr.; Rear Com, George C. Miller; Fleet Capt., Harry Groth; Secretary, Edward Effinger; Financial Secretary, Paul Rosa; Treasurer, John Fraas.

BERGEN POINT Y. C. OFFICERS.—At a recent meeting of the Bergen Point Y. C., the following officers were elected: Com., M. S. Borland; Vice-Com., W. W. Grant; Rear-Com., J. C. Shaller; Secretary and Treasurer, W. R. Wilde; Fleet Capt., W. T. Barnard; Fleet Surgeon, J. G. L. Borgmeyer, M.D.; Measurer, W. E. Wadman.

STEAM YACHT ADMIRAL SOLD.—Mr. George R. Sheldon, N. Y. Y. C., has sold the steam yacht Admiral, through Messrs. Tams, Lemoine & Crane, to Mr. J. B. Edson.

The same firm has chartered the steam yacht Seminole, owned by Mr. John N. Robins, to Mr. Walter S. Gurney; the steam yacht Mirage, owned by Rear-Com. Cornelius Vanderbilt, to Mr. E. F. Whitney and the British steam yacht Surf, owned by Mr. F. D. Lambert, to Mr. E. B. Alexander.

POLLYWOG LAUNCHED.—On April 3 the racing sloop Pollywog was launched at Oakland, Cal. The boat was built by her owners, Messrs. George N. Tyler and A. G. Byxby. Pollywog is a scow, 24ft. over all, 14ft. 6in. waterline, 7ft. breadth and 4½in. draft of hull. She will carry 350sq.ft. of sail and is fitted with a balance rudder and a dagger board. If Pollywog is as fast as it is expected she will be, a larger boat of the same general type will be built to race against Corinthian.

NEW BOATS BUILDING AT WICK'S YARD.—Four new boats are nearing completion at Mr. F. E. Wick's yard, at Amityville, L. I. One of the boats is for Dr. Ralph Tacoly, of New York city. She is 22ft. waterline and 36ft. over all. Her rig is of moderate size, and she will be used for cruising. Another boat is for Mr. John Thornton, of Brooklyn. She is a catboat, 32ft. over all. The 25ft catboat ordered by the late Dr. J. M. Polk is also finished. Mr. Wick has built a 32-ft. racing boat for his own use.

AMERICAN POWER BOAT ASSOCIATION.—A meeting of the executive committee of the American Power Boat Association was held on April 13. Mr. W. H. Ketcham presided. Thirty-three clubs are now enrolled in the association as the Rhode Island Y. C., of Providence; the Hartford Y. C., of Hartford, and the Audubon Y. C., of New York city, have been elected to membership.

The following racing schedule was adopted: May 30, Association race; June 11, Columbia Y. C.; June 18, New Rochelle Y. C.; June 20, New York Y. C., Glen Cove; June 23-25, Challenge cup race, Hudson River; July 2, American Y. C.; July 4, Indian Harbor Y. C.; July 16, Atlantic Y. C.; Aug. 6, Larchmont Y. C.; Aug. 11, New York Y. C.; Aug. 13, Manhasset Bay Y. C.; Aug. 18, New York Y. C.; Aug. 20, Brooklyn Y. C.; Aug. 27, Larchmont Y. C.

A resolution was adopted, stating that races held by clubs holding membership in the American Power Boat Ass'n should, if possible, restrict the entries to boats owned by members of such clubs, except in the case of the New York, Larchmont and Eastern Y. C.'s.

The matter of issuing certificates of speed was disposed of in this way. A course of one nautical mile in length has been surveyed and laid out in Manhasset Bay, L. I. The executive committee of the association will name a member of the association who will, on notice, be at the Manhasset Bay Yacht Club house at Port Washington on the third and fourth Saturdays of May, June, July, August and September, 1904, for the purpose of certifying to the speed of power boats over this course.

Arrangements for timing must be made with the secretary of the association, at least one week's notice being given, and the application must be accompanied by a check for $10 and a certificate of rating of the boat in the form used by the association, to which the association will annex its certificate of speed.

It was announced that the portion of the Grosvenor bill before Congress relating to pilots being required upon motor boats has been stricken out.

COM. LAUDER'S APPOINTMENTS.—Com. George Lauder Jr., of the Indian Harbor Y. C., has made the following appointments: Fleet Capt., L. D. Armstrong; Fleet Surgeon, Leander P. Jones, M.D., and Fleet Chaplain, the Rev. M. George Thompson.

U. S. REVENUE CUTTERS REFITTED.—Among the United States revenue cutters in which Roberts boilers have lately been installed are the Mackinac, Winnisimmet, Hudson, and Calumet.

The new revenue cutter, known as No. 12, now building by the Spedden Shipbuilding Company., at Baltimore, is also to have a Roberts boiler.

These boilers are 11ft. 6in. wide by 9ft. 3in. fore and aft. They have 70 sq.ft. of grate surface and 2,800 sq.ft. of heating surface, and furnish about 700 H.-P. each with natural draft in connection with triple expansion engines.

Several Roberts boilers have also been lately furnished for revenue cutters on the Pacific Coast.

Six Roberts boilers have also recently been shipped to the Cuban Government for installation in Cuban revenue cutters.

OCEAN Y. C.—The Ocean Y. C., of Stapleton, S. I., have elected the following officers: Com., Louis Birkle; Vice-Com., James Clark; Rear-Com., Samuel W. De Beer; Sec'y, John Schrone· Meas., James Dunn; Fleet Surgeon, Arthur Welch, M.D.; Trustees, Thomas J. McKnight, three years, and George Stapleton, one year; Membership Committee, Rudolph Michel, Reuben Mord and Fred Martens.

KAYOSHK TO RACE IN SOUTHERN WATERS.—Another Northern racing yacht has been added to the fleet of the Southern Y. C. Com. Frank H. Libby, of the Oshkosh (Wis.) Y. C., has sold through the agency of Mr. L. D. Sampsell to the J. B. Campbell syndicate the crack Class A boat Kayoshk, one of the champions of the Inland Lake Y. A. Kayoshk is one of the latest and best of the productions of Messrs. Jones & La Borde. She will represent the Southern Y. C. in the races for the championship cup of the Southern Gulf Coast Y. A., for boats of the Seawanhaka cup type. The yacht clubs of the Mexican Gulf are fostering this class in order to participate in the international game next year. There is some talk even now of the club putting up a $1,000 prize for an Interstate race for this class of boats next winter. Kayoshk was only ten points behind Comet II., winner of the championship of the I. L. Y. A. championship contest on Lake Winnebago last summer, the third boat being more than one hundred points behind the leaders. Comet II. would also have been purchased South, but her owners would not sell, as she is entered for the trial races of the White Bear Y. C., challenger for the Seawanhaka cup.

Kayoshk is the second racing scow to go South this spring, the well-known freak Caroline having been purchased by a member of the Southern Y. C. some weeks ago.

NEW BOATS BUILDING AT GREENPORT.—At the yards of the Greenport Basin and Construction Co., Greenport, L. I., several boats are being built. The largest of these is a cruising launch, which boat was designed by Mr. Theodore Brigham. She is 60ft. over all, 51ft. 6in. waterline, 12ft. breadth and 3ft. 3in. draft. The boat is equipped with a 40 horse-power Standard engine, which will drive her at a speed of about 12 miles.

Another launch is being built for a yachtsman who spends his summers at Shelter Island. She is 36ft. over all, 31ft. 2in. water line, 8ft. breadth, and 2ft. draft. This boat will have a Standard engine of 15 horse-power, and it is expected that she will develop a speed of about 10 miles.

The work on the cruising sloop for Mr. Benjamin Atha, of Newark, N. J., is well advanced. She is 41ft. over all, 25ft. waterline, 10ft. breadth and 6ft. 6in. draft. She will carry 1100 sq.ft. of sail.

NEW BOAT FOR THE REV. LINDSAY PARKER.—There is building at Mr. A. N. Harned's yard, St. Johns, N. B., a 20ft. waterline sloop for the Rev. Lindsay Parker, Ph.D. The boat will be known as Alauna, and she was designed by Mr. Henry J. Gielow. She is 27ft. 6in. over all, 20ft. waterline, 10ft 4in. breadth and 1ft. 7in. draft.

WILLIAMSBURG Y. C. SCHEDULE.—The following dates have been decided upon by the Williamsburg Y. C.: May 1, in commission; May 28-30, spring cruise; June 12, spring regatta; July 2-4, summer cruise; July 10, special race; Aug. 7, ladies' day; Sept. 3-5, fall cruise; Sept. 18, open fall regatta; Oct. 30, out of commission.

NEW BOATS BUILDING AT FREEPORT.—Several new boats are being built at the yards at Freeport, L. I. Among them are the following: A 30-footer for Mr. John Slade, New York city; 46ft. launch for Mr. A. B. Cartledge, Philadelphia; 35ft. launch for Mr. Lorimer A. Cushman, New York city; 27ft. steam launch for Mr. Ernest Wrightmeir, New York city, and a 22ft. catboat for Mr. James Dean, Freeport.

CRUISING RACE FOR CHICAGO Y. C.—The Chicago Y. C. has arranged for a long cruising race from Chicago to Mackinac, to be held on Aug. 3, a distance of about 320 miles. The race will be open to all clubs on the Great Lakes. Suitable trophies will be offered for the schooner and sloop classes. A cup for the boat making the best time will also be given.

OISEAU CHANGES HANDS.—Mr. Harry Maxwell has sold his 30-footer Oiseau to a member of the Seawanhaka Corinthian Y. C. She may compete in the races for the Manhasset Bay challenge cup.

SEAWANHAKA CORINTHIAN Y. C. FIXTURES.—The race committee of the Seawanhaka Corinthian Y. C. is composed of Messrs. Henry H. Landon, chairman; Clinton H. Crane, Henry M. Crane, Victor I. Cumnock and Howard C. Smith, secretary. This committee has arranged the following schedule:

May 30 (Memorial Day)—Club races for raceabouts and 15-footers; June series races, first race.

June 4, Saturday—Club race for reaceabouts and 15-footers; June series races, second race.

June 11, Saturday—Club races for raceabouts and 15-footers; June series races, third race.

June 18, Saturday—Club races for raceabouts and 15-footers; June series races, fourth race; Leland Cup.

June 25, Saturday—Thirty-fourth annual Corinthian race for all classes; raceabouts; Seawanhaka 15-footers; June series races; fifth race; Corinthian prizes.

July 2, Saturday—Club races for raceabouts and 15-footers; challenge cup series, first race.

July 4, Monday—Cup races for raceabouts and 15-footers; challenge cup series, second race.

July 9, Saturday—Club races for Alfred Roosevelt Cup, yawls; 15-footers; challenge cup series, third race.

July 16, Saturday—Club races for raceabouts and 15-footers; challenge cup series, fourth race.

July 23, Saturday—Club races for raceabouts; ladies' race; 15 footers; Hastings cups.

July 30, Saturday—Club races for 15-footers; challenge cup series, fifth race.

August 6, Saturday—Club races for raceabouts and 15-footers.

August 13, Saturday—Club races for raceabouts and 15-footers.

August 20, Saturday—Club races for raceabouts and 15-footers; challenge cup series, sixth race.

August 27, Saturday—Club races for raceabouts and 15-footers.

September 3, Saturday—Club races for raceabouts and 15-footers.

September 5 (Labor Day)—Robert Center memorial cups; classes to be named later.

September 10, Saturday—Fall regatta, Seawanhaka Club race, all classes.

RECENT SALES OF YACHTS.—Mr. Frank Bowne Jones has made the following sales through his agency:

The auxiliary yawl Vesta, by Mr. John H. Smedley, of Detroit, to Mr. George H. Bourquard, of New York.

The racing yawl Memory, by Mr. T. J. Preston, Jr., to Mr. H. Mason Raborg.

The auxiliary Venessa, which yacht is being fitted out at Morris Heights, for Detroit.

The sloop Pellegrina, sold, in connection with a Boston agent, to Mr. Robert Toland, of Philadelphia.

The power boat Imp, by Mr. John Cairns, to Dr. F. D. Bowne, of Richmond, Va.

The knockabout Trouble, by Mr. W. H. Childs, to Mr. William A. Barstow, of the Atlantic Y. C., and the Seawanhaka knockabout Hawk, by Mr. A. P. Hallett, to Mr. H. Schuyler Howe.

CALYPSO SOLD TO SOUTHERN YACHTSMAN.—The celebrated Hanley 25-ft. cabin yacht Calypso, champion of the Y. R. A. of Mass. for 1901 and 1902, has been sold by Mr. A. W. Chesterton, of Boston, through the agency of L. D. Sampsell, secretary of the Southern Y. C., to Mr. S. F. Heaslip, of New Orleans, La. She will go South on the deck of a steamer of the Morgan line at once.

POWER BOATS BY MESSRS. TAMS, LEMOINE & CRANE.—Last week we stated that Messrs. Tams, Lemoine & Crane had gotten out plans for eight power boats. We gave particulars about two of them. The other boats are as follows:

A 50ft. boat is being built by Mr. Robert Jacob, City Island. She is for Mr. J. Insley Blair, and will be equipped with a 75 horse-power Smith & Mabley engine.

A boat, slightly smaller, is building at Morris Heights for Dr. Walter B. James. She is 44ft. long, 9ft. breadth, and her power consists of a 24 horse-power Panhard engine.

The Huntington Mfg. Co., New Rocelle, are building a boat 30ft. long and 5ft. 6in. breadth for Mr. A. C. Newbauer. This boat will have a 24 horse-power Panhard engine.

A 36ft. boat with 5ft. breadth is building for Mr. M. C. Hermann. She will be fitted with a 75 horse-power Smith & Mabley engine.

Two other boats will be built to the order of Messrs. Smith & Mabley. Both are 40ft. over all, one 5ft. breadth, and one 4ft. 6in. One is equipped with a 75 horse-power motor and the other with 150 horse-power.

All communications for FOREST AND STREAM *must be directed to Forest and Stream Pub. Co., New York, to receive attention. We have no other office.*

Rifle Range and Gallery.

Fixtures.

June 12-20.—National Schuetzenbund Festival, Union Hill, Schuetzen Park, N. J.

Providence Revolver Club.

SCORES of pistol team of the Providence Revolver Club, in return pistol match against the pistol team of the Myles Standish Rifle Club, of Portland, Me.

Shot at Providence, R. I., March 16, Standard American target reduced to 45ft.:

W H Freeman	10	7	10	8	9	10	8	8	10	8—88	
	10	8	10	9	8	10	10	8	7	8—88	
	10	10	7	10	7	10	9	10	6	10—89	
	9	9	9	9	8	9	7	9	9	10—88	
	8	9	8	10	8	9	7	10	10	9—88	441
Capt R LeB Bowen	7	9	10	10	8	10	8	9	10	9—90	
	8	8	8	8	10	7	9	10	6	10—84	
	10	9	7	6	10	9	7	10	8	8—84	
	10	10	9	10	8	9	6	7	7	8—84	
	9	10	7	6	8	10	9	7	6	8—80	422
F B Barstow	8	8	7	7	6	10	9	8	7	6—76	
	8	9	6	7	9	7	6	8	8	9—77	
	9	8	8	8	7	6	10	10	9	9—84	
	9	8	8	8	8	6	5	8	10	10—80	
	10	10	10	8	8	10	7	6	10	6—85	402
Sergt Wm T Bullard	8	10	8	10	9	8	8	9	8	8—86	
	10	9	8	4	7	9	6	5	9	8—75	
	8	8	7	10	5	10	7	7	7	5—74	
	10	8	10	4	10	7	10	8	6	6—79	
	6	8	7	6	7	7	7	10	10	8	76—390
F M Leonard	5	6	7	8	6	7	10	6	6	10—69	
	10	9	4	10	7	9	8	7	6	9—79	
	8	10	8	10	8	10	8	8	7	7—84	
	10	7	7	6	7	7	7	4	6	9—70	369
											2024
Myles Standish Rifle Club total											1971
Providence team led by											53

A. C. HURLBURT, Sec'y.

New York City Corps.

THE New York City Corps began its summer practice shoot on the Union Hill range on April 13. The attendance was fairly good. The scores were not high owing to lack of previous practice. Aug. Kronsberg was first on the ring and man targets. John Facklamm was first on the point target.

Ten-shot scores, 25-ring target, distance 200yds.: Aug. Kronsberg 207, J. Facklamm 195, J. Keller 193, R. Busse 190, R. Schwanemann 189, R. Bendler 186, W. Grauetin 185, Ch. Wagner 149, H. C. Radloff 176, O. Schwanemann 174, A. Stolzenberger 170, J. Moje 163.

Man target, 3 shots, possible 60: Aug. Kronsberg 56, Ch. Wagner 55, R. Busse 53, H. C. Radloff 48, R. Bendler 46, W. Grapentin 45.

Point target: John Facklamm 60, R. Busse 50, R. Schwanemann 35, Aug. Kronsberg 22, O. Schwanemann 21, W. Grapentin 21, R. Bendler 16, Ch. Wagner 14, J. Keller 5, L. Schultz 3, W. Wiltz 2, Ch. Metz 1, Louis Zietzmann 1.

Bullseye target: Aug. Kronsberg 4, J. Facklamm 4, W. Grapentin 4, H. C. Radloff 1, R. Bendler 1, R. Schwaneman 1. J. Keller 1, O. Schwanemann 1.

Cincinnati Rifle Association.

CINCINNATI, O.—The following scores were made in regular competition by members of the Cincinnati Rifle Association, at Four-Mile House, Reading road, April 10.

Conditions, 200yds., offhand, at the 25-ring target.

Payne was champion for the day with the good score of 229. A strong fishtail wind blew all day from 3 to 6 and 9 o'clock quarters:

Payne	229	217	217	216	215
Roberts	221	218	217	217	210
Hasenzahl	221	213	207	203	200
Nestler	219	210	209	208	208
Odell	215	212	202	201	200
Freitag	215	193	190	186	179
Bruns	211	207	184	183	...
Hofer	210	207	206	204	203
Lux	209	208	206	202	199
Hoffman	197	192	185	183	182
Trounstine	197	195	188	178	176
Uckotter	192	189	182	179	179

Zettler Rifle Club.

THE scores of the winter gallery shoot of the Zettler Club have been of a high order. Capt. W. A. Tewes is in the lead and will finish in first place:

Ten-shot scores, 25-ring target, distance 75ft., offhand:

One hundred shots: Wm. A. Tewes 2460, L. C. Buss 2442, L. P. Hansen 2445, G. J. Bernius 2284.

Fifty shots: Aug. Kronsberg 1219, A. Moser 1208, C. G. Zettler, Jr., 1203, H. C. Zettler 1200, W. A. Hicks 1197, B. Zettler 1189, L. Maurer 1188, C. G. Zettler, Sr., 1184, A. Begerow 1175, H. Fenwirth 1174.

Extra scores, 100 shots: Wm. A. Tewes 2440.

Fifty shots: L. P. Hansen 1202, G. J. Bernius 1153.

Rifle About New York.

THE New York Central Corps will hold its first outdoor shoot for the coming season at Union Hill Park, on April 21.

The Harlem Independent Corps will hold its first practice shoot on the Union Hill range on April 25.

The New York Corps, under the leadership of its new captain, John H. Hainhorst, will hold its first practice shoot at Union Hill Park on Friday, April 29.

The New York City Corps will hold its second shoot in the summer practice at Union Hill on April 27.

The Zettler Rifle Club will open its outdoor practice shoot at Union Hill on the first Saturday in May, and the members will practice every Saturday during the month. The club pays the expense of the targets.

Rifle Notes.

The daily press recounts the death of Dr. Sumner Paine. He died at his home in Boston, on Monday of this week. His death was caused by pneumonia. He was one of America's greatest and most famous pistol shots.

Trapshooting.

If you want your shoot to be announced here send a notice like the following:

Fixtures.

April 20-21.—Rensselaer, Ind., Gun Club amateur tournament. Everette Brown, Mgr., Pleasant Grove, Ind.
April 21.—Dover, N. H., Sportsmen's Association first shoot of the season. D. W. Hallam, Sec'y.
April 21.—Brunswick, Me., Gun Club's Fast Day shoot. G. M. Wheeler, Sec'y.
April 21.—Easton, Pa.—The Independent Gun, Rifle and Pistol Club's first annual target tournament. Edw. F. Markley, Sec'y.
April 23.—Trenton, N. J., Shooting Association's big merchandise shoot. J. R. Taylor, General Manager.
April 23.—Philadelphia.—Team shoot: Trenton University vs. University of Pennsylvania.
April 26.—Greenville, O., Gun Club amateur tournament. H. A. McCaughey, Sec'y.
*April 26-27.—Pittsburg, Pa.—Herron Hill Gun Club tournament. $100 added. Louis Lautenslager, Mgr.
April 26-29.—Kansas City.—Spring target tournament at Blue River Park. R. S. Elliott, Mgr.
April 27-28.—Americus, Ga.—The Interstate Association's tournament, under the auspices of the Americus Gun Club. H. S. McClesky, Sec'y.
April 30.—Princeton, N. J.—Team shoot: Princeton University vs. Crescent Athletic Club, of New York.
May 3-4.—Wabash, Ind., Gun Club tournament. Austin Flynn, Sec'y.
*May 3-4—Derry, Pa., Rod and Gun Club.
May 3-5.—Junction City, Kans.—Kansas State Sportsmen's Association annual tournament. E. L. Wetzig, Sec'y.
May 4-5.—Rochester, N. Y., Rod and Gun Club spring tournament.
May 4-5.—Nashville, Tenn.—The Interstate Association's tournament, under the auspices of the Cumberland Park Driving Club. Charles Eastman, Sec'y.
May 7.—New Haven, Conn.—Intercollegiate shoot.
May 11-12.—Springfield, O., Gun Club's target tournament. Geo. Morgan, Sec'y.
May 11-13.—Spirit Lake, Ia.—Iowa State Sportsmen's Association tournament. J. Burmister, Sec'y.
May 12-13.—Wilmington, Del.—Wawaset Gun Club annual spring tournament. W. W. Foord, Sec'y.
May 16-18.—Southern Trapshooters' Association's thirteenth tournament at targets, under auspices of Vicksburg, Miss., Gun Club; $500 added. J. J. Bradfield, Sec'y.
May 16-21.—York, Pa.—Tournament of Pennsylvania State Sportsmen's Association, under auspices of York City Gun Club. N. M. McSherry, Sec'y.
May 17-18.—Dubuque, Ia., Gun Club's fifth annual amateur target tournament. A. F. Heeb, Cor. Sec'y.
May 17-19.—Davenport, Ia.—Cumberland Gun Club's annual amateur tournament. W. F. Kroy, Sec'y.
May 18.—Boston, Mass, Gun Club annual team target shoot. H. Kirkwood, Sec'y, 23 Elm street, Boston.
May 18-19.—Auburn, N. Y., Gun Club tournament. Jos. H. Knapp, Mgr.
May 18-20.—Columbus, Neb.—Nebraska State Sportsmen's Association's twenty-seventh annual tournament. G. A. Schroeder, Sec'y.
May 19-20.—Oklahoma City.—Territorial Sportsmen's Association fifth annual tournament; $300 added money. J. C. Clark, Sec'y.
May 19-21.—Minneapolis, Minn., Gun Club handicap target tournament. Fred E. McKay, Sec'y and Mgr.
May 20.—Charlotte, N. C., Gun Club tournament.
May 21.—Princeton, N. J.—Princeton University vs. University of Pennsylvania.
May 23-25.—Houston, Tex.—Texas State Sportsmen's Association tournament.
May 24-25.—Marshalltown, Ia., Gun Club two-day target tournament
May 24-25.—Olean, N. Y., Gun Club two-day tournament. B. D. Nobles, Sec'y.
May 24-25.—Natchitoches, La., Gun Club tournament.
May 24-25.—Mt. Sterling, Ky.—Kentucky Trapshooters' League tournament. Frank Pragoff, Sec'y, Louisville, Ky.
*May 25-26.—Brownsville, Pa., Rod and Gun Club.
May 25-26.—Shamokin, Pa., Gun Club Spring shoot. S. C. Yocum, Sec'y.
May 28-30.—Butte, Mont.—Montana State Sportsmen's Association eleventh annual tournament at targets; $500 added. C. H. Smith, Sec'y.
May 30.—Utica, N. Y.—Riverside Gun Club all-day target tournament; free merchandise prizes. E. J. Loughlin, Sec'y.
May 30.—Newport, R. I.—Aquidneck Gun Club's third annual tournament. J. S. Coggeshall, Secretary, Box 9, Newport, R. I.
May 30.—Albany, N. Y.—West End Gun Club tournament. H. H. Valentine, Sec'y.
May 30.—Detroit, Mich.—Winchester Gun Club fourth annual Decoration Day tournament. T. M. Brodie, Sec'y.
May 30-31.—Norristown, Pa.—Penn Gun Club holiday shoot. A. B. Parker, Sec'y.
May 30.—McKeesport, Pa.—Spring tournament of the Enterprise Gun Club. Geo. W. Mains, Sec'y.
May 30.—Ossining, N. Y., Gun Club Decoration Day target shoot. C. G. Blandford, Capt.
May 31.—Dayton, O.—Rohrer Island Gun Club spring target tournament. W. E. Kette, Sec'y.
June 1-3.—Watertown, S. D.—South Dakota State Sportsmen's Association tournament. F. J. Cory, Sec'y.
*June 7-8.—Ligonier, Pa., Rod and Gun Club.
June 7-9.—Sioux City, Ia.—Soo Gun Club's tenth annual amateur tournament; added money. W. F. Duncan, Sec'y.
June 8-10.—Huntington, W. Va.—West Virginia State Shoot. F. H. Merrick, Sec'y.
June 13.—Middleton, Wis., Gun Club tournament. Frank L. Pierstorff, Mgr.
June 14-15.—Wilkes Barre, Pa.—Hanover Park Shooting Association target tournament. E. L. Klipple, Sec'y.
June 14-16.—Akron, O.—Ohio Trapshooters' League target tournament. G. E. Wagoner, Sec'y.
June 14-16.—New London, Ia., Gun Club midsummer tournament. Dr. C. E. Cook, Sec'y.
June 14-17.—Warm Springs, Ga.—Target and live-bird tournament. Chas. L. Davis, Mgr.
June 15-16.—Battle Creek, Mich.—Tournament of the Michigan State Trapshooters' League. L. K. Forscythe, Sec'y.
*June 15-16.—Millvale, Pa., Rod and Gun Club.
June 15-17.—Lincoln, Ill.—Illinois State Sportsmen's Association tournament. James Davis, Sec'y.
June 21-24.—Indianapolis, Ind.—The Interstate Association's fifth Grand American Handicap at targets. One thousand dollars added to the purses. Elmer E. Shaner, Secretary-Manager, 219 Coltart Square, Pittsburg, Pa.
June 27-July 2.—French Lick Springs, Ind.—Tournament of the National Gun Club. $500 added money. John M. Lilly, Pres., Indianapolis.
July 4.—Brunswick, Me., Gun Club all-day target tournament. G. M. Wheeler, Sec'y.
July 4.—Richmond, Va.— East End Gun Club annual merchandise shoot. J. A. Anderson, Sec'y.
July 4-6.—Winona, Minn.—The Interstate Association's tournament, under the auspices of the Winona Sportsmen's Club. Oswald Leicht, Sec'y.
*July 6-7.—Kane, Pa., Rod and Gun Club.
July 8-9.—Wausau, Wis.—Wisconsin League of Gun Clubs' State tournament. H. G. McCrossen, Sec'y.
July 12-14.—St. Paul, Minn., Rod and Gun Club amateur handicap tournament. J. L. D. Morrison, Sec'y-Mgr.
*July 13-14.—Scottdale, Pa., Rod and Gun Club.
July 19-20.—Shamokin, Pa., Gun Club midsummer shoot. S. C. Yocum, Sec'y.
July 19-22.—Cincinnati, O., Gun Club annual handicap.
July 27-28.—Grand Forks, N. D.—The Interstate Association's tournament, under the auspices of the Grand Forks Gun Club. W. M. Ferguson, Sec'y.
Aug. 9-12.—West Baden, Ind.—Indian tournament; $1,000 added money.
Aug. 10-12.—Brantford, Ont.—Dominion of Canada Trapshooting and Game Protective Association's fourth annual tournament. A. B. Cutcliffe, Sec'y.
Aug. 15-20.—Buffalo, N. Y.—New York State shoot.
Aug. 24-25.—Hot Springs, S. D.—The Interstate Association's tournament, under the auspices of the Hot Springs Gun Club. H. A. Gayhart, Sec'y.
*Aug. 25-26.—Tarentum, Pa., Rod and Gun Club.
*Western Pennsylvania Trapshooters' League tournaments. C. G. Grubb, Sec'y, Pittsburg.

DRIVERS AND TWISTERS.

Club secretaries are invited to send their scores for publication in these columns, also any news notes they may care to have published. Mail all such matter to Forest and Stream Publishing Company, 346 Broadway, New York. FOREST AND STREAM *goes to press on* TUESDAY OF EACH WEEK.

Mr. Elmer E. Shaner, secretary-manager of the Interstate Association, informs us that the tournament scheduled for Dallas, Tex., May 17 and 18, has been cancelled.

The Aquidneck Gun Club, of Newport, R. I., has arranged a series of thirteen shoots for a silver cup, presented by Mr. P. H. Powel. The first one of the series was held on April 13.

On Wednesday of last week the New Jersey Legislature, in special session assembled, passed the bill prohibiting pigeon shooting in New Jersey. The bill takes effect on and after July 4.

The captain-manager, Mr. Robert R. Skinner, informs us that the Ashland Gun Club, of Lexington, Ky., holds club shoots on the first and third Tuesdays of each month, and that all visiting sportsmen are welcome to shoot with them for targets only.

Mr. Louis Williams, of Nashville, Tenn., one of the Winchester Repeating Arms Company's ablest representatives, is convalescing from a severe attack of malarial fever, of which he has been the victim during several weeks past. The multitude of friends of Mr. Williams will rejoice over his recovery.

Mr. John W. Dickinson defended his title to the Arkansas State live bird championship and the Peters Cartridge trophy, emblematic of the title. The match took place at Little Rock, Ark., on April 8. The challenger was Mr. Nick Peay. The scores were 23 to 19, Mr. Peay losing four dead out.

The silver loving cup, which has been an object of keen competitive interest to the members of the Montclair, N. J., Gun Club, was won by Mr. Ezra H. Fitch, at the club shoot on Saturday of last week. On Saturday of this week the Montclair Gun Club has arranged to shoot a return team match with the Montclair Golf Club.

Ossining, Schenectady and Poughkeepsie teams are due to collide on April 23, at Poughkeepsie. Capt. C. G. Blandford, elsewhere in our trap columns, mentions a change of the Decoration Day programme, which will please the visitors, namely, the 25-target event will be $2 instead of $2.50 entrance, and a trophy will be presented to the shooter who makes high average.

The programme of the Wawaset Gun Club, presented for their tournament, to be held on May 12 and 1, has twelve handicap events each day, 15 targets, entrance $1.30, $5 added. Shooting will commence at 9 A. M. Dinner will be served in the grounds. Handicaps, 16 to 20yds. The committee members are: L. J. Squier, Edward Melchior, Jr., J. T. Skelly, Stanley Tuchton and William M. Foord.

At the Indiana State League tournament, at Indianapolis, Mr. Ralph Trimble was high man, with a total of 387 out of 420 targets for the two days, April 12 and 13. In the amateur class Mr. Ernest H. Tripp, one of America's most popular and skillful amateurs, won high average with a total of 360. Mr. Edward Faust, of Warren, won the State badge. The team badge was won by Messrs. J. W. Bell and Jos Michaelis.

The Dubuque, Ia., Gun Club, has issued the programme of its amateur tournament, to be held May 17-18. There are twelve target events each day, eight at 15 and four at 20 targets, entrance $1.50 and $2; $5 added to each event. There are ten average prizes, $5 each. No bang, no bird; but no bang and a fair bird is a lost bird. Targets, 2 cents. Shooting commences at 9 o'clock. Ship shells and guns to the Dubuque Brewing and Malting Co. Hon. Tom Marshall will be manager, and Mr. Fred C. Whitney will be secretary.

Mr. Hood Waters is at present touring through Kentucky, and in that land of pure spring water, fast horses and beautiful women, his sterling trapshooting skill and gentlemanly qualities have won admiration and friendship. At Lexington, Ky., at the club shoot, he broke 91 straight and 98 out of 100. The total for him in the afternoon was 145 out of 150, including ten pairs. Mr. Woolfolk Henderson made the excellent score of 73 out of 75. Mr. Robert R. Skinner broke 49 out of his first 50, then seemingly grew careless, as he only broke 71 out of 75, something over a 94 per cent. gait.

Dr. C. H. Burr writes us as follows: "The annual meeting of the Montpelier Gun Club, of Montpelier, Vt., was held on April 4 The following officers were elected: President, Frank R. Dowley; Vice-President, Geo. B. Walton; Secretary and Treasurer, Dr. Clarence H. Burr; Captain, Geo. B. Walton; Executive Committee, Dr. L. A. Newcomb and J. E. Leland. Several new applications for membership were received. The club voted to install a Leggett trap, and make modern improvements at the club house. Considerable interest was shown at the meeting, and a prosperous year is assured. The club has about thirty-five active members."

The spring tournament of the Enterprise Gun Club, of McKeesport, Pa., May 30, has ten events on the programme, 15, 20 and 25 targets, $1, $1.40 and $2 entrance; totals, 180 targets, $12.60 entrance. Targets 2 cents. Shooters may participate for targets only. In event 6, a Marlin shotgun will be first prize; $5 in gold to each of the next three high guns, and twenty other good prizes. The club has two medals, both gold. Each is a work of art. The first, the Hunter Arms Company medal, is for members only. Competition for it is a series of ten contests, the first of which is April 22, the last Sept. 14. The other, the Daily News medal, is open to sportsmen of the club vicinity. For it there will be three contests, on April 30, and May 7 and 14.

BERNARD WATERS.

Rochester Gun Club.

ROCHESTER, N. Y., April 13.—The long struggle between Messrs. Harry M. Stewart and Thomas F. Adkin for the diamond medal emblematic of the county championship, resulted in favor of the latter at the shoot of the Rochester Gun Club to-day. This was their fourth shoot-off of the tie which occurred two weeks ago, when Stewart defended the trophy. Two weeks ago yesterday Adkin and Stewart tied for high gun and again tied in two successive shoot-offs. Last week Wednesday there was another tie between them.

The snow bothered the shooters yesterday. Stewart had retained the diamond medal since it was first offered. The scores in yesterday's shoot-off follow:

Adkin .....23 22 24 24—93 Stewart .....23 23 25 22—92

There were more members in attendance than usual. The diamond medal contest was the attraction. The scores:

	Broke.	Hdcp.	Tot'l.		Broke.	Hdcp.	Tot'l.
Norton	24	3	27	*Donovan	18	6	24
*Siebold	19	10	29	Siebold	15	8	23
Watson	20	6	26	*Siebold	14	9	23
Shoemaker	20	6	26	Coughlin	17	6	23
Kay	21	5	26	Bonbright	20	2	22
Stewart	24	2	26	Adkin	18	1	19
*Kelly	19	7	26	Clark	16	3	19
Bonbright	23	3	26	Rickman	16	3	19
Donovan	19	7	26	Kelly	14	4	18
*Donovan	19	6	25				

*Back scores.

New York Athletic Club.

TRAVERS ISLAND, N. Y., April 16.—There were several trophy events shot for to-day at the shoot of the New York Athletic Club. For the Sauer trophy there were fifteen contestants. The conditions were 50 targets, handicap allowance added. The scores: Dr. Knowlton (4) 42, McAlpin (4) 49, Foot (12) 27, Norton (8) 41, King (15) 38, Greiff (4) 40, Kintner (20) 37, Koch (20) 41, Montague (20) 42, Barnes (5) 42, Rainey (6) 38, H. Norton (8) 39, Carr (8) 40, De Long (18), Sidam (12) 29.

Tie, 25 targets: Knowlton (2) 19, Montague (10) 23, Barnes (2) 23.

Second tie: Montague (10) 21, Barnes (2) 19.

April cup; won by W. Norton; fifteen contestants. The scores: Dr. Knowlton (2) 19, McAlpin (2) 21, Foot (6) 12, King (8) 24, Greiff (2) 25, Kintner (10) 23, Koch (10) 23, Montague (10) 23, Barnes (2) 23, Rainey (3) 17, Norton (4) 21, Carr (4) 19, De Long 13, Sidam (6) 15.

Shoot-off: Norton (7) 25, Greiff (2) 24.

Rainey cup: McAlpin (1) 18, Foot (6) 17, W. Norton (7) 25, King (8) 20, Greiff (2) 24, Kintner (10) 22, Koch (10) 18, Montague (10) 21, Barnes (2) 19, H. Norton (4) 25, Carr (5) 25.

Shoot-off: W. Norton (7) 25, H. Norton (4) 24, Carr (5) 21.

Ossining Gun Club.

OSSINING, N. Y., April 16.—Appended you will find the scores of the Ossining Gun Club, made at the regular bi-monthly shoot. We must blame the small attendance to the weather. A full gale blew out of the northwest, directly across the traps, which made the shooting most difficult, as the scores will testify. The team of the Ossining Gun Club will go to Poughkeepsie next Saturday, 23d inst., to shoot against the Poughkeepsie and Schenectady gun clubs, 50 bluerocks per man. A fine shoot is anticipated.

Changing the programme of our Decoration Day, May 30, shoot, as published, last week, the 25 target event will be $2 entrance, instead of $2.50, and a trophy will be presented to the shooter making high percentage of breaks out of the 100 targets. Programmes will be sent on application to C. G. Blandford, captain, Ossining, N. Y.

Events:	1	2	3	4	5	6	7	Events:	1	2	3	4	5	6	7
Targets:	10	10	25	25	25	25	25	Targets:	10	10	25	25	25	25	25
C Blandford.	6	7	19	21	..	22	18	J Hyland ...	6	4	16	14	12	..	..
A L Harris.	8	8	13	12	16	19	16	W S Smith..	6	..	..	..	..	..	..

C. G. B.

Analostan Gun Club.

WASHINGTON, D. C., April 17.—The annual meeting of the Analostan Gun Club, of Washington, D. C., was held recently, and the following officers were elected for the ensuing year: Burridge Wilson, President; C. S. Wilson, Vice-President; Miles Taylor, Secretary; John Coleman, Treasurer; E. O. Craig, Captain.

Trustees: M. D. Hogan, W. R. Baker and W. H. Hunter.

New grounds have been secured on the Tennallytown car line, overlooking the city, which are much more accessible than the old grounds on Analostan Island. The club, to be up to date, has ordered a Leggett trap, which will be installed this week. A new club house is being built, and when the improvements now under way are completed, the grounds will be the best any club has ever had in the District. New members are being added at each meeting, and the indications are at present that this will be a prosperous year for the club, and a lively one for the trapshooters in this vicinity. SEC'Y.

Bristol Gun Club.

BRISTOL, Tenn., April 14.—Not many were out to-day. The boys are resting from their labors during the Interstate shoot.

We all had a very pleasant time. Some good scores were made. J. W. Gump has done remarkably well as a new shooter. His record has not been equaled by any new member. Messrs. Gillespie and Davis were visitors. The scores:

Targets:	25	25	25	25	25	25	Total.
A M Hatcher	25	25	23	24	25	25	147
R M Crumley	19	22	22	23	22	23	131
J W Gump	23	23	22	16	24	21	129
S W Rhea	21	23	23	23	25	..	115
S G Keller	24	24	23	25	..	..	96
W H Hicks	24	21	..	..	..	..	...
W B Kugore	18	20	..	..	..	..	...
J T Cecil	19	21	..	..	..	..	...
J S Gillespie	8	14	..	..	..	..	...
T F Davis	4	12	..	..	..	..	...

S. W. RHEA, Sec'y.

Mt. Kisco Gun Club.

MT. KISCO, N. Y., April 13.—The Mt. Kisco Gun Club held their first regular club shoot of the season to-day. Too much strong wind for hight scores prevailed. But the traps worked exceptionally well, and made very pleasant shooting.

In practice and sweeps, 558 targets were thrown, and not one left the trap broken. Pretty good record.

The club will shoot every other Wednesday. Next shoot April 27. The scores:

Events:	1	2	3	4	5	6	Events:	1	2	3	4	5	6
Targets:	10	15	10	15	15	25	Targets:	10	15	10	15	15	25
Gorham	8	13	7	13	11	19	Betti	8	9	7	12	10	..
Carson	4	9	8	8	13	17	Robbins	2	3	2	2	2	8
Sutton	8	9	..	..	11	..	Van Dusen	3	11	8	6	..	..
Palmer	3	8	..	..	..	..							

R. W. GORHAM, Sec'y.

IN NEW JERSEY.

New York German Gun Club.

Carlstadt, N. J., April 13.—The shoot of the New York German Gun Club to-day was well attended, nineteen members participating in the main event at 10 birds. Kattengell was the star performer. He killed 10 straight in the main event, and 2 out of 5 in the sweep. The scores:

Kattengell	1111112222—10	Pfender	0210202121— 7
Wellbrock	0002220201— 5	Dannefelser	02010*1221— 6
Schlicht	1222200202— 7	Steffens	0111*10*10— 5
Dr Hudson	11102202*1— 7	Hagenah	2200000000— 2
Hendrickson	0**20220*0— 3	Ludeking	2220220010— 6
Garms	0111110010— 6	Oldner	0000000001— 1
Mesloh	0121002*01— 5	Lempe	1011000201— 5
Belden	2102122220— 8	Zeman	0000000201— 2
Wilson	2202212222— 9	Radel	02200*1000— 3
Exner	0012000020— 3		

Sweep, 5 birds:

Dannefelser	01121—4	Garms	30110—3
Steffens	12012—4	Kattengell	*0011—2
Hendrickson	00211—3	Lempe	12220—4
Wellbrock	*2202—3	Hagenah	20000—1
Mesloh	11101—4	Ludeking	22220—4

Pattenburg Gun Club.

Pattenburg, N. J., April 15.—About twenty contestants took part in the tournament to-day. The scores below show the results. There were numerous prizes, and they were well distributed; yet Harry Gano, of the home team, took all the first prizes, winning a hammerless gun, a Marlin repeating gun, a gold watch, and was in for first money in sweepstakes.

The day was as nice as ever a day could be. Visitors were here from Baltimore, New York, Jersey City, Perth Amboy, Ringoes, Easton, and the surrounding towns. Our boys will soon put in a Leggett and hold a sweepstake shoot for a reopening. Due notice will be given. The trade was represented by J. M. Hawkins and H. Overbaugh. Mr. Hawkins did good work and left a good impression on the people here. Mr. Overbaugh, who has been with us before, has established himself with the boys, and they think things are not going right without him.

Events:	1	2	3	4	5	6	Shot	
Targets:	25	25	25	10	10	10	at.	Broke.
J M Hawkins	25	24	23	8	7	9	105	98
A K Hellman	11	..	..	..	..	..	25	11
A E Holbrook	21	19	..	4	8	8	80	60
R Heaney	18	21	23	..	..	..	75	62
A Barber	16	..	..	..	..	..	25	16
O S Skeds	18	19	19	..	..	..	75	56
J Warford	22	23	24	..	..	..	75	69
Wm Hartman	20	23	20	7	9	7	105	86
J Van Marter	20	13	16	7	8	7	105	71
F Potter	18	..	..	..	..	..	25	18
Harry Gano	24	25	24	9	10	9	105	101
W S Bowlby	22	18	..	..	8	4	70	52
H P Milburn	15	12	..	7	9	7	80	50
R Stamets	21	23	..	..	..	..	50	44
C W Bonnell	21	18	..	..	6	8	70	53
Lyon	..	23	23	..	..	..	50	46
B Gano	..	..	22	..	..	..	25	22
H L Gano	..	..	..	..	7	5	20	12
*H L Gano	20	..	..	..	..	..	25	20
R Heaney	22	22	22	..	..	..	75	66
J Warford	23	23	..	..	..	..	50	46
A E Holbrook	..	22	..	..	..	..	25	22
C. W Bonnell	..	20	..	..	..	..	25	20

C. W. BONNELL, Sec'y.

Hudson Gun Club.

Jersey City, N. J., April 17.—The Hudson Gun Club held its second April shoot on April 17, and it was a good one; in fact, the best of the present year. The day was fine for target shooting and some good scores were made, especially the run of 34 by Schorty in the cup event.

Mr. George Piercy kindly donated two fine hand-painted steins as prizes for a 100-target race. Schorty started off as if he intended to make a runaway race of it by breaking 25, while Chas. Dudley broke 20 and F. Schoverling 21. The prizes were won by Chas. Dudley and Schorty. At the close of the 100-target event, it was found that Schorty and Piercy were tied. Pope, Jr., shot a good race for a beginner.

This club holds shoots every two weeks, the next being on May 1. The scores:

Events:	1	2	3	4	5	6	7	8	9	10
Targets:	15	20	25	25	25	25	25	15	25	10
Dudley, 20	12	17	20	21	23	17	..	..	..	..
Piercey, 20	11	19	21	21	20	19	22	14	22	8
Schorty, 20	9	14	25	20	18	17	21	14	22	8
Staples, 19	9	16	16	15	22	17	20	..	..	..
Cottrell, 16	7	10	15	18	14	14	14	..	..	..
F Schoverling, 17	11	11	21	10	15	16	20	10	..	..
Brewer, 16	6	..	11	12	6	10	..	..	..	..
Pape, 17	11	16	19	18	16	12	24	12	..	..
G Hughes, 16	8	10	13	16	12	17	..	..	..	..
Gille, 16	7	13	11	11	..	..	..	..	..	..
Van Dyne, 17	12	12	18	19	16	16	..	..	..	..
Van Valkenburg, 18	12	12	16	20	15	18	16	8	15	..
Pape, Jr, 16	10	15	13	18	21	18	20	..	..	..
W Pearsall, 18	12	17	18	16	..	..	..	..	..	..
Headden, 16	8	14	12	..	..	..	..	..	..	..
H Pearsall, 19	12	17	18	16	..	..	..	..	..	..
Craft, 16	..	10	13	12	..	..	..	..	..	..
Hennessy, 16	..	8	10	..	..	..	..	..	..	..
Doran, 16	..	..	13	14	16	..	..	..	..	..
Maj Stag	4	..	..	..	..	..	..	..	..	..
Reynolds	11	..	..	..	..	..	..	..	..	..
Hughes	6	..	..	..	..	..	..	..	..	..
Whitley	8	..	14	14	15	15	..	..	..	..
Clifton	..	13	..	..	..	..	..	..	..	..
Edwards	..	17	..	..	..	..	..	..	..	..
O'Brien	..	..	..	..	15	21	..	..	..	..

JAS. HUGHES.

Montclair Gun Club.

Montclair, N. J., April 16.—There was a very good attendance at the shoot of the Montclair Gun Club to-day, and, notwithstanding the very high winds that were blowing, some very good scores were made.

The first event was the shoot-off of the tie for the Siever loving cup between Messrs. Charles W. Kendall and Ezra N. Fitch, 50 targets each. Mr. Kendall broke 29, which, added to his handicap of 11, gave him a score of 40, while Mr. Fitch broke 36, which, with his handicap of 5, gave him a score of 41, he just winning the cup by one point.

The second event was a match between the teams of the Montclair Golf Club and the Montclair Gun Club, 50 targets per man, six men on a team. The Montclair Gun Club won with a score of 209 to that of the Golf Club's 189, the defeated team having the pleasure of paying for the targets.

Messrs. Babcock, Fitch and T. E. Batten did particularly well, Mr. Batten showing the greatest improvement over past performances.

Messrs. Holzderber, Perley, Fitch and Batten shot with the Golf Club team to-day; they are, however, members of the Gun Club as well, but were needed to fill out the team of the Golf Club.

On April 23 the Gun Club expects to shoot a return match on the grounds of the Golf Club.

The scores are appended herewith:

No. 1, 50 targets, shoot-off of tie for Siever loving cup:

	Broke.	Hdcp.	Tot'l.		Broke.	Hdcp.	Tot'l.
C W Kendall	29	11	40	E H Fitch	36	5	41

Event No. 2, match between Montclair Gun Club and Montclair Golf Club, 50 targets:

Montclair Golf Club Team.	
Allan	31
Cross	30
Fitch	36
Holzderber	32
Geo Batten	19
Perley	41—189

Montclair Gun Club Team.	
T E Batten	37
Babcock	38
Gunther	35
Kendall	35
Wheeler	32
Cockefair	32—209

Events:	3	4	5	6	7	8	9	Events:	3	4	5	6	7	8	9
Targets:	25	10	15	25	10	15	10	Targets:	25	10	15	25	10	15	10
Holzderber	13	8	10	16	8	12	9	Matthews	14	..	..	15	..	5	4
Gunther	18	..	9	17	..	11	9	Doremus	14	7	7	..	..	..	..
Perley	18	7	9	..	9	8	..	Howard	14	..	..	..	..	..	..
Kendall	21	5	9	20	..	13	..	Wheeler	..	..	9	11	19	6	..
T E Batten.	22	..	..	21	..	..	..	Allan	13	..	10	17	8	7	..
E Fitch	21	10	..	..	..	..	..	Cross	20	..	..	17	5	11	..
C Babcock	..	7	10	24	..	..	..	Cockefair	19	7	9	16	..	13	..
W Soverel	12	..	..	..	..	..	..	Crane	..	10	11	..	6	..	..
G Batten	..	5	9	..	..	..	..								

EDWARD WINSLOW.

Bound Brook Gun Club.

Bound Brook, N. J., April 17.—Herewith please find scores made at our silver shoot, April 16, entrance, price of targets. The day proved to be a very windy one, and the targets were very hard to land. The new trap worked very fairly; not a hitch all day long.

The trade was represented by Messrs. Hawkins, Overbaugh, Capt. Money, Glover and Vosseler. Mr. Hawkins won high professional average, a silver cup. Mr. Bissett, of South River, N. J., won high amateur average, a silver loving cup. He also made the longest straight run, 24, which was a good many under the conditions. Mr. Lyon, of Raleigh, N. C., won second high amateur average, and the Easter loving cup with 23 out of 25, a very good score under the conditions. Some other winners were Tingley, Jules, Hadkins, Brown and Martin. Mr. Overbaugh did good work in assisting the management.

We shoot the third Saturday of each month.

Events:	1	2	3	4	5	6	7	8	9	10	11
Targets:	15	15	15	15	15	15	15	15	15	15	25
J M Hawkins	13	13	13	12	12	13	14	12	12	12	22
G L Lyon	12	12	9	10	12	10	12	12	12	14	23
Simpson	5	8	7	7	12	8	8	10	9	8	16
Berdam	7	7	9	6	7	8	6	6	6	9	13
Compson	11	10	8	6	7	9	..	..	..	..	..
J H V Bache	10	..	..	..	8	..	9	..	9	10	..
J B Pardoe	10	..	13	..	..	..	9	..	10	..	20
Martin	10	..	8	..	9	..	6	..	8	..	..
Bissett	13	14	15	14	13	13	11	9	10	15	19
Hadkins	11	10	10	9	9	12	9	11	10	13	17
Ellis	6	3	7	..	8	12	8	..	9	9	..
F Stelle	9	..	6	..	..	..	..	..	..	..	..
W G Tingley	10	9	11	11	10	13	13	10	11	14	17
Jules	10	9	11	6	11	11	10	13	9	14	8
Capt Money	..	..	9	7	11	13	11	12	12	13	18
Glover	..	..	..	12	13	9	10	12	13	13	21
Smith	..	..	..	..	8	..	6	..	..	..	..
Vosseler	..	..	..	..	..	5	7	5	7	11	..
Staats	..	..	..	..	..	..	5	4	9	8	..
Dunn	..	..	..	..	..	..	..	8	8	9	..
Brown	..	..	..	..	..	..	..	8	13	12	..
Ackers	..	..	..	..	..	..	..	7	8	12	..
Mahnken	..	..	..	..	..	..	..	6	7	10	..
Du Four	..	..	..	..	..	..	5	3	..	..	..
Worley	..	..	..	..	..	..	..	5	7	..	..
Sebring	..	..	..	..	..	..	..	4	5	..	..
Gavin	..	..	..	..	..	..	..	10	9	..	..
Gaskill	..	..	..	..	..	..	..	..	9	..	..

Extra events:

Events:	1	2	3	4	5	6	7	Events:	1	2	3	4	5	6	7
Targets:	10	10	10	10	10	5	5	Targets:	10	10	10	10	10	5	5
J B Pardoe.	7	7	5	8	7	4	3	Martin	6	6	5	6	..	3	1
Vosseler	7	3	3	3	..	..	..	Gavin	8	8	6	9	3	..	..
Sebring	2	4	2	4	..	..	..	Brampton	4	5	7	3	2	4	3
Worley	4	5	4	4	..	..	..	Smith	2	7	3	6	8	3	3
Staats	2	3	..	..	..	..	..								

J. B. PARDOE.

Franklin Gun Club.

Franklin Furnace, N. J., April 16.—The target shoot of the Franklin Gun Club to-day resulted as follows: Shooting at 30, John Williams broke 14, Frank Kishpaugh 17. Alf Wright broke 16 out of 29. Ander Wright broke 9 out of 26. Shooting at 25, Will Stephens broke 12, Charles Redimer 21.

Arkansas Champio ship.

LITTLE ROCK, Ark.—On April 8 John W. Dickinson, Jr., holder, and Nick Peay, challenger, met to dispute the possession of the Peters Cartridge Company's live bird trophy, emblematic of the State championship, on the grounds of the Little Rock Gun Club. The conditions of the match were 25 live birds per man, Interstate rules, 30yds. rise, challenger to put up $10 against the medal; winner to take money and medal, and loser to pay for the birds.

Dickinson experienced little trouble in defending his title, and won handily by the score of 23 to 19. Peay, however, shot a much better race than the score indicates, and with a little more luck would have made matters more interesting. The birds were a good strong lot, and a fierce gale was blowing, which handicapped him materially and caused him to lose four very hard hit birds dead out of bounds and but two got away entirely. Dickinson also had one dead out of bounds. Litzke acted as referee.

After the match, several 10-bird sweeps were shot. John Pemberton showed to the best advantage in these and scooped all the money.

Little John Dickinson, No. 3, the thirteen-year-old son of J. W. Dickinson, Jr., did some very clever shooting considering the high wind, scoring 8 out of 10 in one event. Following are the scores of the match:

Dickinson	2121221?*1112212101122212?—23
Peay	*1?2?2?2?012?2*2?2?2?2?*2?02—19

ON LONG ISLAND.

Brooklyn Gun Club.

Brooklyn, L. I., April 16.—The wind blew a gale, and low scores resulted in consequence. Fifteen events were shot. The scores:

Events:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Targets:	15	10	15	15	10	15	10	15	15	*	*	15	10	15	25
J S Wright	8	6	9	7	..	..	..	..	9	7	8	10	7	10	17
J H Frost	7	6	6	8	2	9	8	7	..	..	..	..	6	9	15
E Symon	6	5	5	5	4	7	7	8	..	..	..	..	6	7	12
W Himer	4	4	10	5	4	6	6	..	..	..	..	..	8	8	15
Tanty	6	5	6	7	6	6	8	..	..	..	..	..	8	8	15
Winter	..	..	..	..	9	..	17	..	10	6	6	10	9	10	18

J. S. WRIGHT, Mgr.

Experiments with Shot.

To determine the striking power of shot for different ranges, the firing portion of the programme was completed some while back; but a good deal of time had necessarily to be spent in subjecting the results obtained to mathematic analysis. The experiments in question involved not only the taking of very complex readings, but additional care was necessary, by reason of the fact that we had set ourselves the task of bringing up to date the results published in these columns some eighteen years ago, as a result of the work which had then been accomplished in the same direction by Mr. R. W. S. Griffith. Where our own results differed from those previously recorded exceptional pains were necessary in order that we might feel justified in adopting revised values.

Mr. Griffith was fortunate in having the then editor of this paper, the late Mr. F. W. Toms, at his back as mathematical expert. His results were accordingly subjected to an exhaustive analysis, and the structure of calculation thus created was reported at length in a series of highly interesting articles. In following up this important piece of research, it became necessary to lay out a programme calculated to give us the greatest possible benefit to be derived from the improved apparatus which is now available. Our preliminary experiments, which were recorded in the issues already quoted, comprised, the firing of 50 shots, and from these most important information was obtained. We were able, by their aid, to lay down a programme of tests enabling us to obtain the striking velocity of every size of shot for every range from 10 to 40yds., inclusive. The total number of shots fired was only 40, and from these, 160 time measurements were obtained. In this way we were able to show a great improvement on the methods of eighteen years ago, the apparatus of to-day giving actually more and better information than was obtainable on the previous occasion by the firing of upward of 2,000 shots.

The method employed by Mr. Griffith was to take a series of different combinations of powder and shot charges and record the results obtained therewith at every range up to 60yds. We were able in our own case to replace these combinations with a single loading of cartridge, representing the standard which has been developed of late years, the cartridge in question giving a velocity of 1,050ft. per second over 20yds., with a shot charge of 1⅛oz. Furthermore, we decided that the velocities up to 40yds. would suffice for all practical purposes, and this again enabled us materially to cut down the number of observations required. Our preliminary experiments first of all gave us the very important information that all sizes of shot and all borings of gun gave practically the same mean velocities over the 20yds. range. That is to say, that, while small shot gave a higher muzzle velocity than the larger sizes, the ballistic advantage so gained was exactly compensated by their reduced ranging power after leaving the muzzle. In a similar manner it was found that, while choke barrels reduced the velocity of the charge in the act of passing through the constriction at the muzzle, the more compact flight of the pellets enabled them to recover this loss during their flight from the muzzle to the 20yds. screen. Thus, the results over 20yds. were similar, whether cylinder or choke bored guns were used. This extraordinary process of compensation, covering as it did the extremes of gun boring and the extremes of shot sizes, enormously cut down the range of work to be carried through. In fact, before the experiments had proceeded very far we were able definitely to ascertain that at or about 7yds. from the muzzle a standard loading of cartridge gave an equal velocity, independently of the size of shot or the degree of choking at the muzzle of the gun.

In the old experiments the striking velocity of the shot at the different ranges was obtained by a somewhat roundabout method. The velocities which were originally published gave the mean values from the muzzle to various distances up the range. Thus the velocity from 0 to 35yds. represented a certain time of flight, and the difference between this and the time obtained from 0 to 40yds. gave the time occupied in covering the odd 5yds. between the distances named. While a comparatively rough time measurement will give a reasonably exact result from 0 to 40yds., the difference between any two such times over adjoining distances must give only a very rough approximation of the true result. However, working from such information as was then available, Mr. Toms built up for shot sizes Nos. 5 and 6 a series of striking velocities at various ranges which he himself described as being as accurate as was humanly posible to obtain.

With the chronograph which we now use it is possible to erect wire screens at every distance along a given range, and to record with great exactitude the points of time at which the charge of shot progressessively cuts the succeeding screens. In this way we were able to obtain from the firing of each cartridge four time-measurements. The range was thus divided into two sections, and a separate cartridge was fired for each of them. It was found that beyond 30yds. the results were so irregular as to render the readings obtained valueless. Hence we decided that the whole of our attention should be concentrated on the more consistent series of readings which were obtainable from 0 to 30yds. The averages so obtained were fairly consistent, and it was evident that the information required lay concealed somewhere amid the mass of figures that resulted from the 40 shots that were fired. Having before us a number of values which in some instances represented greater individual disconformity for one range than could exist between adjoining pairs of screens, it was necessary to bring to work a system of patient examination. By taking the rough averages, and by setting the same out in the form of curves, a general impression was obtained as to the time values that must exist in practice. Following upon this, the Bashforth system of calculating differences of velocity for different distances was brought into play, and we thus had side by side the results obtained from the instruments and those obtained by taking the observed velocity at a given distance as a basis of calculation, and finding therefrom the appropriate velocity for other distances forward or backward.

Having arrived at the conclusion that the differences of velocity recorded between the adjoining shot sizes were so small as to be regarded as representing but much less than the errors of the instrument itself, we decided to limit the sizes employed to Nos. 3 and 7. Having exactly defined these limits, we felt sure that the intermediate sizes could, with every justification, be fitted in mathematically in proportion to their relative sectional density. It was fortunate that this policy was adopted at an early stage of the experiments, because otherwise the enormous mass of figures involved would have defied the detailed mathematical treatment that we were able to accord to the handful number that were ultimately taken. By eliminating obviously false readings, and by selecting for mean values those figures which were in closest harmony with the other values obtained at other distances for the same size of shot, a harmoniously proportioned curve was in due course built up from the figures obtained. From this it was apparent that we had not, after all, departed very much from the actual records which had been obtained in the experimental firings. The following tables show the selected values for Nos. 3 and 7 shot, together with details of the instrumental observations from which they were derived:

Velocity Readings for No. 3 Shot in Cylinder Gun.

Position of recording screens:	0—5 yards.	5—10 yards.	10—15 yards.	15—20 yards.	20—25 yards.	25—30 yards.
Velocities recorded (1)	1263	1111	992	938	882	833
(2)	1188	1111	1000	923	888	822
(3)	1188	1091	1025	909	882	800
(4)	1212	1101	992	938	870	800
(5)	1176	1079	992	943	852	811
Arithmetical averages	1205	1099	1000	930	875	813
Characteristic values selected	1205f.s.	1099f.s.	997f.s.	928f.s.	870f.s.	816f.s.

Velocity Readings for No. 7 Shot in Cylinder Gun.

Position of recording screens:	0—5 yards.	5—10 yards.	10—15 yards.	15—20 yards.	20—25 yards.	25—30 yards.
Velocities recorded (1)	1238	1101	974	943	820	774
(2)	1238	1091	968	909	822	728
(3)	1238	1091	962	888	838	759
(4)	1250	1091	962	870	845	711
(5)	1250	1091	974	896	811	750
Arithmetical averages	1243	1093	968 (?)	901	827	744
Characteristic values selected	1243f.s.	1093f.s.	988f.s.	897f.s.	823f.s.	758f.s.

Velocity Readings in Feet per second for Nos. 3 and 7 Shot, in Choke and Cylinder Guns.

No. 3 Shot.

Position of recording screens:	0—5 yards.	5—10 yards.	10—15 yards.	15—20 yards.
Velocities recorded (1)	1176	1132	1035	915
(2)	1176	1101	1025	938
(3)	1154	1101	992	926
(4)	1200	1101	1035	932
(5)	1212	1090	1008	938
Arithmetical averages	1184	1105	1015	929
Characteristic values selected	1185	1099	997	928

No. 7 Shot.

Position of recording screens:	0—5 yards.	5—10 yards.	10—15 yards.	15—20 yards.
Velocities recorded (1)	1176	1101	976	909
(2)	1176	1121	931	915
(3)	1176	1091	938	926
(4)	1188	1091	946	904
(5)	1224	1154	976	943
Arithmetical averages	1188	1112	953	919
Characteristic values selected	1185	1099	988	897

Taking the tabulated figures in the order in which they are given, it will be seen that we have adopted the arithmetical averages of the velocities recorded for the first 10yds., of the flight of the shot. Having made a curve setting out the results obtained up to the limit distance of 30yds., we selected 870ft. per second as the characteristic value for the velocity between 20 and 25yds., and we treated this as the absolute value at the midway point between these two screens. By working on Bashforth's system of calculation, we obtained the velocities for all the other distances recorded. We found that up to 10yds. the calculated values did not apply, this of course being due to the well-known fact that the air resistance encountered by a charge of shot on emerging from the muzzle of the gun is something between that of a solid spherical ball and that of the individual pellets comprising the charge. Between 10 and 30yds. we found that the results obtained from Bashforth were in close agreement with the actual velocity records obtained. We accordingly adopted for the characteristic velocity over each distance the results calculated on the Bashforth basis. The differences between the arithmetical averages and the figures which agree with the Bashforth formula and table are strikingly small. In fact, we believe that this is the first occasion on which a table of shot velocities has been published in which the recorded values agree with figures obtained from Bashforth. The records for No. 3 shot, as fired from a cylinder gun, are thus placed beyond question, and their exact agreement with calculations based on Bashforth laws for the flight of spherical projectiles justifies us in assuming that for distances beyond the range at which records were taken the striking velocities may be worked out by calculation alone, our experiments having shown us that beyond 30yds. the instrumental readings are too irregular to be of value. We accordingly found by calculation that the striking velocity at 40yds. of a No. 3 pellet, traveling in the manner indicated in the table up to 30yds., must be 706ft. per second.

The second table shows a similar series of readings for No. 7 shot. The marked increase in velocity over the first 5yds. may, by reason of the information obtained in our earlier experiments, be attributed to the increased chamber pressure which arises through the presence in the cartridge of a small size of shot, the extra resistance increasing the strength of the powder to an extent sufficient to impart a considerable amount of extra muzzle velocity. Between the 5 and 10yds. screens the velocity is practically the same as that of No. 3 shot, and thence onward there is a gradually increasing separation between the two sets of records. We thus see that a velocity of 816ft. per second for No. 3 shot between 20 and 25yds. becomes 758 for No. 7 shot. Working forward by calculation, we found that the 40yds. striking velocity of No. 3 shot, viz., 706ft., becomes 629ft. in the case of No. 7. Before leaving the second table, attention may again be called to the remarkable conformity that exists for most distances between the average values obtained by experiment and those selected as characteristic for the size of shot under consideration. The only exception occurs in the case of the 10 to 15yds. record, the value 968 being obviously a false one, due to instrumental errors. For the purpose of our calculated values, 823ft. per second was adopted as the characteristic 20 to 25yds. velocity. This gave 758ft. between 25 and 30yds., as compared with the 744ft. for the experiments. By cutting out the individual record 711, we obtained for the remaining figures an average velocity of 753ft. This correction was fully justified by reason of the facts which were made clear in the course of the systematic examination of the figures which was conducted. Following the practice adopted with No. 3 shot, the values fixed for the first 10yds. were the strict arithmetical averages obtained from the experiments.

The results so far quoted relate exclusively to the shooting of a cylinder gun. In the third table the records obtained with choke boring are duly set forth. The figures obtained up to 20yds. only are recorded, the values beyond that distance being analogous to those adopted for the cylinder records. The choke results with No. 3 shot for the first 5yds. are identical for shot size No. 7, the assumption being that anything that may be gained in velocity by the small sizes of shot is exactly counterbalanced by their extra loss in passing through the choke at the muzzle. Beyond 5yds. the records so nearly agree with those registered from the cylinder barrel that we decided that, in dealing with striking velocities, choke and cylinder barrels might be treated as giving the same results. It will be seen that the choke gun records are not so regular as those obtained in the case of the cylinder. For instance, with No. 7 shot from 10 to 20yds., the 10 to 15yds. value is obviously too low, while that from 15 to 20yds. is nearly as erroneous in the opposite direction. This implies that the time recorded at 15yds. had got out of adjustment, with the result that the intervals for the adjoining distances were measured one too high and the other too low. In the case of the choke gun and No. 3 shot the conformity with the cylinder results was much better maintained, and the agreement for the distances beyond those recorded in the table was still more marked. In fact, the average velocity registered betwen 25 and 30yds. for No. 3 shot in a choke barrel was identically the same as was obtained in the firing of the cylinder. Thus, all things considered, and in the light of the careful checks which we applied to the figures obtained, we have good reason for saying that choke boring does not influence the velocity of shot charges for a greater distance than 10yds. from the muzzle.

This, for the moment, completes the figures and conclusions to be put before the reader. It will be seen that we have obtained a thoroughly consistent series of records for Nos. 3 and 7 shot for all distances up to 30yds. From 10yds. onward the values recorded are in complete harmony with Bashforth's laws relating to the flight of spherical projectiles. This agreement between theory and practice justifies us in continuing the values up to 40yds. by calculation alone, and, so far as that is concerned, we could go even further. The limit arises when the striking velocities go below 500ft. per second, when the rules no longer apply. In order to obtain the absolute striking velocity at all points from 10 to 40yds., we have laid out the records in the form of curves. By so doing, we have been able to read off the velocities at 5yd. intervals along the range, and a table for the two extreme sizes of shot dealt with has been built up accordingly. Curves representing the intermediate sizes of shot were then introduced by calculation between the extremes so defined; the particular position allocated for each curve being determined by the sectional density of the size of shot under consideration.—London Field.

Division of Moneys.

UTICA, N. Y., April 16.—*Editor Forest and Stream:* I would like to say a word about division of moneys at small shoots. I will take the State of Pennsylvania, for I am better known there. There are not more than twenty-five men in the whole State who are fit to shoot high guns or Rose system, that is, who have a chance to keep in the money, while there are over twenty-five hundred who are fit to shoot the Jack Rabbit system; that is, $1 entrance, birds extra. A shooter gets 10 cents for every broken target, and the 10 cents for every unbroken target goes into a pot to be divided as the management sees fit. At Millville, Pa., last fall, a father entered for himself and son for two days, $70; bought 800 shells. They shot about 75 per cent. apiece, and were paid $6—pretty expensive sport. As it is, they very likely will never come again.

Now with the Jack Rabbit system it would have been impossible for them to lose more than 25 per cent. At Johnstown, Pa., Sept. 17, 1903, the Jack Rabbit system was used. Forty-two men shot altogether, and it was optional to shoot for targets only; but every man, mind you, shot for money. The grand average for that shoot was less than 70 per cent. Yet, not a man withdrew, and many never got above 50 per cent. John Dennicker made more money at this shoot than any one he attended last year. At an Interstate or an open, free-for-all, high guns, Rose system or class system is the proper way to divide money, as no one has any business there but a man who is a good shot. But for the one and two days' shoots throughout the country the Jack Rabbit system is the best, for it brings in the rank and file of field shooters and others that run from 40 to 75 per cent. Mr. Good Shot will get all the money at this system, but Mr. Poor Shot will get a run for his money, and get on speaking terms with the cashier and learn a trick or two about the game while he is doing it. This system was invented by Mr. Charles Brelsford, president of the Harrisburg Association, when I had the honor of being a member, fifteen years ago. The Worden brothers were then, as they are now, officers of that club, and it stands out as one of the most progressive gun clubs in the United States. The Jack Rabbit system was largely responsible for holding this club together, and I do not know of another one in the United States that has not missed a meeting. If any one does not understand this division and will write me, I will send him a little booklet explaining it.

E. D. FULFORD.

Remington Gun and Rifle Club.

ILION, N. Y., April 13.—The annual meeting of the Remington Gun and Rifle Club was held at their rooms, in the armory, last evening, and the following officers were elected to serve for the ensuing year: President, G. E. Humphreys; Vice-President, H. H. Bassett; Secretary and Treasurer, W. H. Grimshaw; Captain, R. H. Tomlinson; Collector, Charles Jenne; Trustees: L. N. Walker, W. F. Lawrence, J. F. Loy, J. Haltmar, G. S. De Lany, T Corbin, J. D. Pederson, F. A. Russell.

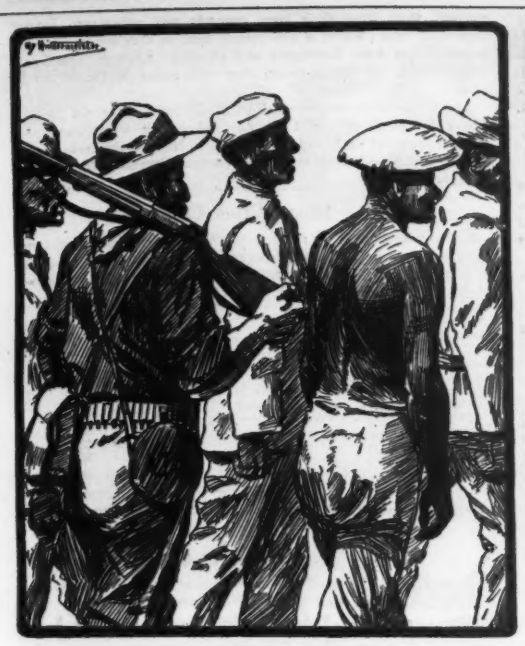
The past season has proved a very successful one for the club, and it is expected that the coming season will be a lively one with the boys. The club has a membership of forty-five, and have ample grounds, with a suitable club house, which is easily reached by trolley. During the past season there has been built a 200yd. rifle range, which is greatly enjoyed by the rifle shooting fraternity. In addition to the magautrap used by the club, there will be set up this season expert traps for practice use. This addition to the trapping facilities will be much appreciated by the members, as it gives them an opportunity to practice over both kinds of traps.

Weekly shoots will be held on the rifle range and at the traps, and the committee of the club are actively engaged in arranging tournaments to take place early in the summer.

Aquidneck Gun Club.

NEWPORT, R. I.—The events at Wednesday's shoot of the Aquidneck Gun Club, inaugurated a new series of thirteen matches for a silver cup, presented by Mr. P. H. Powel under the following conditions: Each match to take place on alternate Wednesdays at 50 targets, unknown angles, the total of ten best scores to win. A distance handicap to govern, as follows: The winners to go back one yard with each successive win up to 20 yards, returning to 16 yards upon another winning a match. Ties to be shot off at 10 targets, expert rules. A superior lot of scores were the result of the first match, as follows:

Targets:	10	15	10	15	T'l.	Targets:	10	15	10	15	T'l.
Hughes	10	10	10	13	—43	Mason	9	11	8	11	—39
Powel	9	9	9	14	—41	Bowles	9	9	8	13	—39
Alexander	7	12	8	13	—40	Dring	8	9	8	12	—37
Peckham	9	14	8	9	—40						



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WESTERN TRAP.

Indiana State League Tournament.

INDIANAPOLIS, Ind., April 15.—The State League shoot was held here on April 12 and 13, and proved a grand success in every way, especially in the attendance, as there were seventy-five shooters, all told.

The conditions were somewhat against the shooters, as the scores will show; they are low for the traps and grounds used by the club selected for the 1904 Grand American.

Ralph Trimble was high man first day, though he lost 23; but on the second day he came forth strong, and lost but 10, thus scoring 387 out of 420, and taking high professional average with plenty to spare.

The highest amateur score was that of the well-known and much-liked Ernest H. Tripp, of the English Hotel fame. His score was 360.

Of the State events, the individual State badge was won by Edward Faust, of Warren, while the team badge went to Jos. Michaelis and J. W. Bell, of the Indianapolis Gun Club.

The traveling representatives were fairly plentiful: John Boa, Ralph Trimble and Fred Lord. Jim Head was the head shooter on the list. He was first to the score and last man to stop.

H. W. Vietmeyer was present, and made new friends while expounding in the interest of the powders he exploits.

Jack Fanning was surely there, making little smoke save of the targets, as his load ground out 193 the last day.

Kirby was busy for his company, and shot the whole programme through.

The officers and members have held such good tournaments here that they are accustomed to handling big crowds. With Mr. Allen as secretary and office man, everything moves off smoothly.

No one had any "kick coming" save on his poor shooting, and when the scores are so generally low, the high men loom up finely by comparison.

The Indianapolis and the Indiana shooters are very enthusiastic over the prospects of the G. A. H. being the greatest ever brought off in the shooting world. The scores:

April 12, First Day.

Events:	1	2	3	4	5	6	7	8	9	10	11	12	Shot at.	Broke.
Targets:	15	15	15	15	15	15	25	25	25	15	15	15		
Head, 16	13	13	12	14	14	13	21	21	22	13	12	13	210	181
Pluto, 16	13	10	11	12	12	10	18	17	..	..	..	..	140	103
Zea, 16	12	14	14	13	11	13	13	18	19	13	10	9	210	159
Fagot, 16	6	7	12	7	6	..	..	..	17	11	7	..	130	73
Tripp, 17	13	13	13	13	12	10	21	21	21	13	11	14	210	175
Voris, 17	11	11	9	12	12	12	20	19	15	13	12	14	210	160
Faust, 18	14	14	11	12	12	10	23	15	21	13	12	11	210	168
Nicols, 17	12	11	13	12	13	11	22	17	19	10	10	11	210	161
Vietmeyer, 16	13	13	13	15	13	11	18	16	19	12	9	11	210	162
Stetson, 16	12	11	10	12	9	10	19	15	20	13	6	9	210	146
Britton, 17	13	12	14	11	13	12	24	18	18	13	12	9	210	169
Connors, 18	14	12	14	10	13	11	25	16	24	12	12	11	210	174
Parry, 17	12	9	14	13	14	14	21	17	22	12	14	10	210	172
Boa, 16	15	15	11	13	14	12	18	21	20	15	12	13	210	177
Fanning, 16	11	11	14	14	13	14	23	21	21	13	13	14	210	180
Trimble, 16	14	10	12	14	14	11	23	22	25	13	15	14	210	187
Lord, 16	13	15	13	11	12	13	23	12	22	15	11	13	210	173
Kirby, 16	13	11	9	13	13	12	19	17	20	13	10	11	210	160
Farrell, 17	12	9	10	13	8	6	17	20	18	11	10	11	210	145
Spencer, 17	10	11	11	14	11	10	17	19	19	10	13	11	210	156
Clark, 18	12	11	12	8	13	10	18	15	14	8	9	10	210	140
Brown, 17	12	9	11	11	10	11	17	..	21	12	14	12	185	149
Peck, 17	5	6	14	9	13	10	19	21	23	13	12	11	210	156
Losbrough, 18	11	8	13	13	11	12	21	17	20	12	12	12	210	162
Le Compte, 18	12	12	14	11	12	13	25	19	22	12	13	13	210	178
Caldwell, 16	5	8	9	7	9	7	..	..	..	..	..	8	105	53
Illiff, 16	10	11	12	10	9	13	18	..	..	..	..	..	115	83
Michaelis, 17	12	10	12	..	..	21	19	21	13	9	13	..	165	120
Marshall, 16	11	7	13	11	14	13	23	20	19	9	12	10	210	162
Reed, 16	12	11	13	14	15	12	22	19	21	10	14	13	210	176
Moeller, 17	10	14	12	12	11	11	17	17	19	12	13	12	210	160
Dougan, 16	11	9	9	5	10	8	21	18	23	11	11	7	210	143
Moore, 16	11	10	11	11	13	13	19	21	21	11	10	13	210	164
Cook, 16	10	12	8	10	12	8	23	11	16	6	..	..	180	116
Dickman, 17	..	..	12	13	13	12	21	22	18	13	11	12	180	149
Harcourt, 16	..	..	..	11	10	11	20	15	12	18	7	8	165	104
Nash, 17	..	..	..	10	12	13	22	18	18	10	8	9	165	120
Short, 17	..	..	..	10	10	11	21	17	18	7	..	..	135	94
Irwin, 16	..	..	..	..	..	..	..	15	17	20	13	..	90	65
Powell, 16	..	..	..	..	..	..	..	..	..	7	7	..	30	14
Ryan, 16	..	..	..	..	..	..	..	..	..	6	5	..	30	13
Cherry, 16	..	..	..	..	..	..	..	..	..	6	10		30	16

April 13, Second Day.

Events:	1	2	3	4	5	6	7	8	9	10	11	12	Shot at.	Broke.
Targets:	15	15	15	15	15	15	25	25	25	15	15	15		
Head	14	14	11	14	13	14	21	22	21	14	14	14	210	186
Moeller	10	11	12	13	11	11	21	22	19	10	13	12	210	165
Parry	12	10	14	14	13	13	24	22	18	13	14	15	210	182
Losbrough	11	11	8	13	13	11	21	18	20	13	13	12	210	164
Michaellis	8	11	11	11	13	12	21	23	20	13	11	14	210	168
Rike	12	11	13	13	14	14	20	23	23	15	12	11	210	181
Faust	11	8	11	13	13	11	22	23	23	15	13	12	210	175
Trimble	13	14	14	12	14	15	25	24	25	15	14	15	210	200
Williamson	12	10	14	12	14	10	19	17	23	18	12	11	210	164
Brown	12	11	14	12	9	11	17	20	..	..	..	..	140	86
Le Compte	13	12	11	12	12	11	22	17	23	13	14	13	210	176
Nichols	13	8	10	7	12	9	..	..	..	..	..	..	90	59
Spencer	13	11	11	12	11	14	21	20	22	13	14	13	210	179

Boa	12	12	15	11	12	13	24	23	21	14	13	11	210	182
Partington	15	13	11	9	10	12	23	16	22	9	11	..	195	152
Vietmeyer	11	9	7	11	13	14	19	20	20	12	13	11	210	170
Peck	13	10	13	14	13	11	22	18	24	12	13	12	210	175
Zea	9	11	12	13	12	12	17	21	22	12	12	15	210	168
Caldwell	12	10	8	11	13	12	..	18	..	..	..	12	55	96
Short	14	12	10	12	14	13	20	23	21	..	..	..	155	142
Ryan	13	8	10	8	11	12	22	20	..	..	..	..	130	104
Fanning	13	15	14	15	14	12	22	25	23	14	13	13	210	193
Sayles	12	12	11	12	10	13	19	13	22	14	12	12	210	162
Farrell	9	5	11	10	9	11	19	21	20	13	15	12	210	155
Dougan	10	7	9	9	10	8	14	13	19	..	..	..	155	99
Marshall	11	13	13	14	14	10	22	21	23	13	12	10	210	178
Lord	13	13	9	13	14	12	21	19	23	11	11	10	210	169
Clark	13	10	13	11	7	12	25	19	23	12	15	14	210	174
Connor	13	11	9	12	14	10	24	22	22	11	14	9	210	171
Tripp	12	13	13	14	14	13	22	22	24	15	11	12	210	185
Kirby	13	13	13	12	10	12	21	24	23	14	12	15	210	182
Stilson	12	14	15	13	14	13	21	24	21	13	13	12	210	184
Page	9	10	12	10	12	12	19	20	..	..	..	..	140	104
Bender	10	11	11	12	12	12	18	17	21	12	11	12	210	159
Nash	9	14	13	10	11	13	22	22	20	11	14	11	210	170
Long	12	14	13	14	14	13	..	22	..	15	14	14	160	146
Smoke	11	12	11	12	14	10	..	21	..	12	9	..	145	112
Strong	10	14	13	9	9	8	..	21	..	13	..	..	130	96
Reed	..	..	..	..	12	13	13	12	21	..	..	..	96	71
Brown	..	..	..	..	..	10	..	..	..	..	..	..	15	10
Bell	..	..	..	..	..	..	..	..	22	..	..	..	25	22
Medico	..	..	..	..	..	..	..	17	21	17	12	13	120	92
Richard	..	..	..	..	..	..	..	..	..	..	5	4	30	9

Witt Gun Club.

Witt, Ill., April 13.—Now that the ducks have gone glimmering, so far as the open season is concerned, there will be something on now and then at the traps.

The opening club shoot was held Tuesday, shooting at 25 targets: Hartline 20, Dean 21, Payne 17, Teeters 18, Redmond 16, Hess 14, Jester 13.

Hazlehurst Gun Club.

Hazlehurst, Miss.—The last meeting of the newly organized gun club brought out some fine scores by J. H. Long, Jr., who shot at 75 targets, scoring 70. Lilly broke 34 out of 50, McKinnell 39 out of 50, Hawkins 12 out of 25, H. Miller 36 out of 50, Graves 36 out of 50, Woods, 60 out of 75, Granberry 35 out of 50, Lord 20 out of 25, Salter 16 out of 25, Granberry 19 out of 25.

Morrisonville Gun Club.

Morrisonville, Ill., April 14.—The club members got out to-day and attempted to wear the rust off the long idle traps. This caused some unpleasant remarks. Then some of the gun barrels were rusty, and the finger triggers were sadly out of practice. The weather was fine, and that assisted all to try to look pleasant.

The boys will from this on keep up weekly shoots during the summer. The scores, shooting at 25 targets: Stout 23, Reasoner 24, Gibson 22, Manning 21, Clower 20, Wychopp 21, Turk 19, J. H. Stout 17.

Missouri League Inaugural Tournament.

Pleasant Hill, Mo., April 8.—The first tournament given by the Missouri League of Trapshooters was held here April 7, under the auspices of the home club. The League officers were present, and each did his share toward making the meeting a success and in building up the League with the addition of new members.

There were some thirty odd of the braves present, and many more would have run down from Kansas City had not the weather been so threatening. The rain fell thick and fast after 11 A. M. up to the time of calling off the shoot, when 150 targets had been shot at.

Joe Leggett was present, and after regulating that new trap the targets were sent out, going good and plenty. Possibly some of the youngsters thought that the "saucers" would not break when they were wet; but that was no fault of Leggett's. Bob Elliott came down from Kansas City, and his shooting as portrayed by the scores herewith, will show that the trap was working well.

J. J. Cornett was there. Though high man by considerable over all (in inches), he was third high for the day, being but one less than the secretary.

W. H. Heer and Frank Riehl were present, and their good looks and good shooting added much to the enjoyment of the occasion. Heer was high man by a good margin, closing with 142 out of the 150, and the last 50 straight, though rain was in his eye. Water was better than Kansas sand in the eye.

Dave Elliott came also, and the smile was there, still, though not so long as usual, on account of the unceasing rain; yet, in the club house, he got off a few speeches as to the Ideal and High Gun shells.

Pleasant Hill shooters were there with their best foot forward, and yet they could not show to their best advantage owing to the dampness underfoot and overhead.

The next shoot will be held at the grounds of the Butler Gun Club. The scores:

Events:	1	2	3	4	5	6	7	8	9	Shot at.	Broke.
Targets:	15	15	20	15	15	20	15	15	20		
H Davis	14	12	15	12	11	18	11	12	15	150	120
C B Clapp	15	12	17	13	12	20	13	13	18	150	123

Hamilton	13	12	9	13	11	14	12	10	13				150	107
J W Hardy	14	14	15	11	13	15	14	13	15				150	124
Dr Sevier	11	15	18	15	13	17	10	13	15				150	126
Patterson	11	13	17	11	11	13	14	14	17				150	121
Henery	12	13	15	14	12	11	13	14	14				150	118
Smith	15	15	15	11	12	18	15	16	19				150	136
W H Heer	14	13	19	15	14	17	15	15	20				150	142
Gentry	9	11	18	15	13	12	12	12	11				150	113
C Dixon	12	13	15	13	12	19	13	13	15				150	120
J J Cornett	14	14	18	14	14	18	13	10	17				150	132
H Dixon	11	12	15	11	14	18	13	13	19				150	126
J P Leggett	13	11	9	12	10	14	12	9	14				150	104
Thomas	11	14	17	12	15	..	13	14	18				130	114
H Pearce	12	15	15	12	13	14	12	13	18				150	126
J Graham	11	15	16	14	13	15	13	13	17				150	127
Geo Pearce	10	11	6	..	..	..	..	..	..				50	27
G K Mackie	10	13	13	9	8	3	8	8	6				150	78
W Allen	12	14	13	11	12	15	11	11	..				130	99
Beasley	9	11	11	12	14	14	11	9	..				120	91
J M Hunt	5	7	8	8	5	..	..	..	..				30	33
O F Brown	11	15	11	12	13	17	14	10	..				130	105
D Elliott	8	13	14	13	12	16	11	12	..				120	99
Ammond	..	..	..	11	15	..	..	12	..				45	38
Clayton	..	..	..	..	..	14	13	13	12	13			85	75
G M McGee	..	..	..	..	..	12	20	14	10	17			85	73
Dr Planck	..	..	..	..	13	15	11	13	14				85	66
R S Elliott	..	..	..	..	12	11	11	10	9				85	63
E J Turner	..	..	..	..	13	..	11	..	..				30	24

Northville Gun Club.

Northville, Mich., April 9.—Friday the gun club held a tournament which was interfered with by rain and wind. The forenoon was spent in the shelter, and in the afternoon, though the wind was stronger, a remarkable score was made by Charles Hantz, who made the great score of 143 out of 145. George Stanley came strong with 139. Then Mr. Osmun, of Pontiac, showed well and made 24 straight in a miss-and-out.

The two-man team race was won by George and Merrit Stanley with 38 out of 40. The prize was donated by the Peters Cartridge Company.

The scores, shooting at 145 targets, were: C. Hantz 143, G. Stanley 139, M. Stanley 137, P. Woods 126, W. Osmun 124, Jenkins 118, Ingersoll 114; Hawthorn shot at 105, broke 85; Shaw shot at 75, broke 67; Henry shot at 60, broke 58; Kennell shot at 15, broke 12; F. Hantz shot at 70, broke 58; Baldwin shot at 30, broke 28.

Altogether, it may well be claimed that, though the shoot was limited as to members and hindered by rain, the shooting was of the highest amateur order.

Ames Iowa Tournament.

Ames, Ia., April 14.—Tuesday and Wednesday of this week a goodly bunch of Iowa shooters met at Ames, Ia., and passed two pleasant days with Dr. Proctor, at the traps. The weather was cloudy on the first day, while the second day it was fair and windy.

The promoters of the shoot are entitled to much credit for their liberality and the way that they conducted the shoot. The putting up of $100 cash is no small sum for a few enthusiasts to hang up, and the good Iowa shots will not soon forget it.

The trade representatives were C. B. Adams and Chas. Budd, who won first and second average in their class, and one Fred Whitney, who was cashiering when not talking his goods.

John Peterson, Wm. Hoon and Lew Foley were the three high amateurs.

The money was divided on the per cent. plan, four equal moneys, and with the average money made the division popular. The scores:

April 13, First Day.

Events:	1	2	3	4	5	6	7	8	9	10	11	12	Broke.
Targets:	15	15	20	15	15	20	15	15	20	15	15	20	
C B Adams	11	15	20	14	13	20	15	13	20	14	14	20	189
Hoon	14	13	16	15	14	20	13	13	20	15	14	20	184
Proctor	12	14	20	15	14	19	13	15	17	13	13	18	182
Foley	15	14	17	15	15	19	13	12	17	14	11	20	182
McDonald	13	15	18	15	14	13	12	14	19	13	14	16	181
J Peterson	14	13	18	14	12	18	15	12	19	14	13	19	181
Budd	14	11	17	14	14	17	13	13	19	13	15	17	177
Nichols	13	13	13	14	13	20	12	13	19	13	15	16	174
Ford	12	13	13	13	14	15	13	14	17	10	14	18	169
Davis	12	12	20	11	12	16	13	12	17	14	12	17	168
Johnson	13	14	17	11	13	13	14	11	16	13	15	17	167
Snow	12	13	14	11	12	15	13	14	18	13	13	17	165
A Johnson	13	10	17	12	14	14	13	14	17	7	12	17	160
Wallace	12	11	15	13	13	15	13	13	17	12	11	18	163
Adams	9	12	19	12	13	16	11	12	19	15	11	16	164
Peterson	12	13	16	14	14	16	10	9	19	5	13	16	156
Crary	9	13	10	10	8	14	7	10	13	10	..	..	...
Jensen	6	10	16	10	12	13	6	11	13	10	..	..	...
Cundiff	13	10	15	12	12	16	12	10	..	..	..	..	...
Buck	12	13	17	11	11	19	9	13	15	13	..	..	...
Carver	12	12	19	13	11	19	..	..	..	..	..	..	...
Brown	9	12	14	9	11	..	..	11	..	..	..	..	...
Talbott	..	12	11	11	..	..	11	..	..	..	..	14	...
Fornay	..	..	..	9	8	..	..	..	..	..	..	14	...
No Name	..	..	..	..	..	..	..	..	..	18	12	11	19	...

April 14, Second Day.

Events:	1	2	3	4	5	6	7	8	9	10	11	12	Broke.
Targets:	15	15	20	15	15	20	15	15	20	15	15	20	
Adams	12	15	20	14	15	20	14	15	17	13	14	18	187
Peterson	14	13	19	15	14	18	13	12	16	13	13	19	178

Nichols	12	13	18	15	13	17	11	13	13	14	13	19		176
Budd	13	14	19	15	13-14	15	11	17	13	10	19			172
Hoon	14	11	13	14	13	17	12	13	17	15	12	13		173
Ford	12	12	18	12	14	20	13	13	16	13	12	17		172
Foley	14	13	15	13	15	18	10	13	16	12	14	16		169
McDonald	12	12	16	15	15	18	13	9	18	10	13	17		168
Johnson	11	12	16	14	11	16	12	10	17	13	11	19		162
Wallace	14	12	17	11	13	18	11	12	14	14	12	17		165
H Adams	10	14	15	14	12	13	12	13	13	11	1o	17		159
Peterson	10	14	16	11	10	15	9	13	13	12	13	12		148
Proctor	13	9	14	9	6	15	14	11	13	10	13	15		142
French	..	..	..	..	..	..	7	9	..	9	..	..		...
Talbott	..	..	..	..	..	..	9	8	..	..	..	..		...
Kelly	..	..	..	..	..	..	..	9	..	10	..	..		...
Hartman	..	..	..	..	..	..	..	12	15	11	..	13		...
Smith	..	..	..	..	..	..	..	..	20	11	..	..		...

Division of $100 added money:

	Shot at.	1st day.	2d day.	Total.	Won.
J Peterson	400	181	178	359	$25.00
Wm Hoon	400	184	173	357	20.00
L Foley	400	182	169	351	15.00
C B Nichols	400	174	176	350	12.00
McDowell	400	181	168	349	10.00
C Ford	400	169	172	341	8.00
Wallace	400	163	165	328	5.00
Proctor	400	182	142	324	5.00

Watson Park Gun Club.

Burnside Crossing, Chicago.—There was a wind blowing cold and strong, which made the targets quarter swiftly to the right and made the shooting difficult. Each event was at 25 targets. The scores:

Events:	1	2	3	4	5	6	7	8
Lawler	20	21	16	19	20	19	..	..
J B Barto	23	22	18	16	..	..	..	..
E B Shogren	20	21	21	21	18	19	19	19
Engstrom	18	19	22	20	..	..	..	..
L Willard	..	..	..	23	18	20	23	22
Knowles	..	..	..	..	13	15	16	..

SHOTGUN.

Ohio Trap.

Cincinnati Gun Club.

CINCINNATI, O.—April 16. was unusually cold for this time of year, and this may have had its effect on the attendance, which was not up to the mark. The afternoon was clear and bright, but enough wind was blowing to bother some of the shooters quite a little. In the Parker prize gun contest, Faran was high gun in actual breaks with 89. Pohlar and Randall tied for second on 84. Eleven of those shooting made full scores of 100, including their handicaps.

Ackley is once more able to attend the shoots, and his work at practice was fine, he breaking 40 out of 50 targets shot at.

The following notice was posted on the bulletin board in the club room, and Supt. Gambell prefaces the announcement by asking, "How many entries will I receive for this race? Who will shoot through?"

Amateur championship of the Cincinnati Gun Club at flying targets, ten races of 100 targets each, to be shot in strings of 25, all satnding at 16yds. First contest will be held on May 1, and one each succeeding week during May and June. The final contest on July 4. The championship of the club for 1904 and a handsome emblem will be given to the one making the highest average in the ten contests. Shooting to commence promptly at 3 P. M., and will be postponed only on account of bad weather. In such cases two races will be shot the following week. These contests cannot be shot in connection with any other club shoot. Entrance, price of targets only, with optional sweep of $1 in each race, 60 and 40 per cent.

Parker prize shoot, 100 targets, handicap of added targets: Faran (18) 100, Pohlar (35) 100, Linn (25) 100, Pfeiffer (40) 100, Herman (30) 100, Captain (25) 100, Norris (30) 100, Bullerdick (30) 100, W. Weller (32) 100, Kramer (40) 100, Boeh (40) 100, Randall (15) 99, Block (18) 98, Maynard (18) 96, Jack (30) 96.

Team race, 100 targets, five 20s:

Gambell	17 17 15 15 17— 81	Medico	16 19 17 17 14— 83
Faran	18 16 19 19 17— 89	Don Minto	15 15 15 15 14— 74
	35 33 34 34 34—170		31 34 32 32 28—157

The programmes for the tournament at Mason, O., on April 21-22, were distributed at the club to-day. The shoot consists of 180 targets each day, and several of the club members propose to go and try for some of the money. They may get some, but it won't be like finding it, as there are some good shots in the Mason club, such as Randall. A few of the Hamilton boys will likely be there also, and they can shoot a little.

Cleveland Gun Club.

CLEVELAND, O.—The club held its badge shoot on April 13, at the grounds on Mayfield Road. The attendance was small, Williams won the badge with a score of 44; Jack a close second with 43.

Club badge shoot, 50 targets; scores: Williams 44, Jack 43, Eadie 41, Martin 38, Hogen 36, Hopkins 29.

Rohrer's Island Gun Club, Dayton, O.

DAYTON, O.—The Rohrer's Island Gun Club's regular shoot was held on April 13, under hard weather conditions. A snowstorm with high wind prevented a larger attendance, and kept the scores low. Miller, C. Ballman and Schaerf tied for the medal, the former winning in the shoot-off.

Club medal shoot, 25 targets, handicap extra targets to shoot at. The scores, "shot at" and "broke," follow: C. F. Miller 28, 27; John Schaerf 31, 27; C. Ballman 34, 25; W. Kette 33, 24; H. Oswald 28, 23; J. W. Gerlaugh 27, 23; J. E. Barnes 33, 22; J. Sapp 35, 21; H. Nohr 28, 19.

Shoot-off of tie: Miller 11, 8; J. Schaerf 12, 7; C. Ballman 14, 7.

BONASA.

Boston Gun Club.

BOSTON, Mass., April 6.—The regular Wednesday shoot of the Boston Gun Club was attraction enough for just ten shooters, and though the attendance was smaller than expected, the usual good feeling prevailed. The eleven events were replete with the interest that a trapshooter likes to see at any shoot.

High gun average of the day proved to be a battle royal between Allison and Griffiths, the former leading to the tune of one target, and placing to his credit a 90 per cent. average, an unusual event on these grounds. Griffiths' 89 per cent., however, was a good average, and his 22 in the prize match puts him at the top of the list, and is now at the mercy of the handicapper. Other scores:

Targets:	10	15	10	15	15	10	15	10	10	10	Av.
Frank, 18	8	12	8	13	14	9	12	6	..	..	82.0
Griffiths, 19	8	13	9	14	14	8	14	9	..	..	89.0
Howe, 19	7	11	6	11	14	4	9	6	..	..	68.0
Allison, 18	9	13	8	14	14	9	13	10	..	..	90.0
Bell, 18	7	13	10	11	9	8	10	10	..	..	78.0
Blinn, 16	5	11	8	11	13	7	12	8	9	7	75.8
Bryant, 16	..		7	1	7	5	4	8	2	3	3	3	39.1
Williams, 16		11	8	8	10	5	7	6	..	..	..		61.1
Muldown, 16	..	..	..	..	..	..	..	11	10	6	7	6	72.7
Frederick, 16	..	..	..	..	..	..	..	..	8	8	6		73.3

Prize match, 25 unknown; distance handicap:

Frank, 18	1111111110111111111011111—23
Allison, 18	1111111111101111110111111—23
Griffiths, 19	1111111111101111101111011—22
Muldown, 16	1110011111011101111111111—21
Blinn, 16	1110111111111101010111011—20
Bell, 18	1100110111010011111111010—17
Howe, 19	1111111111011110100001l0—18
Williams, 16	0110101011110111011010100—15
Bryant, 16	0100000111000101101100000— 9

Team match:

Griffiths	14	9—23	Williams	8	6—14
Blinn	12	8—20—43	Bryant	8	2—10—24
Frank	12	6—18	Howe	9	6—15
Bell	10	10—20—38	Allison	13	10—23—38

Ashland Gun Club.

LEXINGTON, Ky., April 8.—The opening shoot of the season of the Ashland Gun Club was held Tuesday last, April 5, and it was in every way a success. The weather man furnished a bright warm day, and even if there was a stiff little breeze at times, it only tended to give a tilt to the targets and cause a few more "goose eggs" to be added to the scores of the boys, many of whom had not fired a shot before this year.

The management had provided some live pigeons, and they proved to be a most select lot; not a sitter in the entire number trapped, while some of them were screamers sure enough.

The Ashland has leased for the coming year the grounds of the old Belt Line ball park, right on the street car line, just outside of the city limits, an ideal place to shoot both live birds and targets, as the field and sky are all that could be wished for.

The membership of the Ashland is limited to twenty-five, and already there is a waiting list, showing the desirability and the marked advantage of a club whose members shoot simply for the love of it.

No one who is a resident of Lexington or Fayette county, and who is not a member of the club, is allowed to participate in any of the shoots; but visiting sportsmen who are introduced by any club member are most welcome guests of this exclusive and popular gun club. The scores of the last shoot are as follows:

Events:	1	2	3	4	5	6	7
Targets:	10	10	10	15	15	15	15
J Harp	7	8	6	11	9	9	8
R Skinner	8	9	10	15	15	14	13
R H Smith	5	6	8	8	13	8	..
G K Graves	7	4	..	7	..	..	9

Events:	1	2	3	4	5	6	7
Targets:	10	10	10	15	15	15	15
C Clark	6	4	5	..	5	7	..
W Henderson	..	..	..	14	15	15	13
Van Deren	..	..	..	..	10	12	11	12
W Barrow	5	7	8	..	..	..	..	..

Club event, 7 live birds:

R R Skinner, 28	1111112—7
W Henderson, 28	0211221—6
F Van Deren, 28	1121200—5
C Clark, 28	0002100—2
J Harp, 28	0120021—4
R H Smith, 26	1211012—6
G K Graves, 26	1100201—4

Shooting Notes.

Several of the most prominent men identified with the trapshooting game are using their every effort to effect an organization of the three gun clubs of Lexington with those at Georgetown and Paris, Ky., form a stock company and purchase, or lease for a term of years, suitable grounds located on some one of the interurban railways that connect these three cities, and have the most complete shooting grounds in Kentucky.

Articles of incorporation have already been granted, and several hundred dollars' worth of stock subscribed for.

The shooters of Paris, Ky., are very enthusiastic, and as they are all well-known trapshots, and several of them very wealthy gentlemen, no difficulty has been experienced at that end thus far, the Paris boys only insisting that the new grounds be located easy of access to them.

The club at Georgetown is one of the oldest in the State, and is composed of some of the best shots in the State, and at present they have their own grounds and magautrap located near their city. But it is understood that, as they are only twelve miles distant from Lexington and an equal distance from Paris, with electric cars every hour, they will assist in the consolidation.

At present there are three clubs at Lexington—the old Lexington club, the Fayette, and the Ashland—and it seems likely that the members of each will be glad to unite with the new organization, which will have every convenience necessary for shooters and their friends.

MONK.

Montreal Gun Club.

MONTREAL, Can.—The rainy weather Saturday, April 9, did not keep the members of the Montreal Gun Club from coming out and taking a "whirl" at the traps. The first event was the spoon shoot, and the second event, the president's trophy:

Events:	1	2	3	4	Shot	
Targets:	20	15	20	20	at.	Broke.
Dr Kearney	19	9	17	19	75	64
N Candlish	18	11	18	..	55	47
Landriault	18	9	14	16	75	57
Ccte	18	7	..	..	35	25
McDuff	18	11	15	19	75	63
Edwards	17	11	15	16	75	59
Redmond	17	12	19	15	75	63
Hogan	17	8	..	..	35	25
Cooke	15	11	15	..	55	41
W Candlish	15	11	18	..	55	44

The Westmount Gun Club trophy was also shot off on the Westmount grounds, and was won by Mr. J. F. Hansen, with a score of 20, and Mr. R. Lewis stood second with 18 to his credit.

S.

Holland Gun Club.

BATAVIA, N. Y., April 8.—The weather to-day was raw and cold, with a strong wind and a driving rain. The scores:

Squires	6	8	5	..	Clark	6	9	.. 7
Douglass	4	7	..	..	Williams	5	8	7 8
Ames	8	8	8	7	Farwell	..	..	6 5
Gardner	4	9	1	7				

SIDE LIGHTS OF TRADE.

Concerning the Interstate tournament at Bristol, Tenn., reported in full in FOREST AND STREAM of April 16, the high average contestants, Messrs. Crosby, Money and Trimble, professionals, and the amateurs, Messrs. Hatcher and Bachman, used Winchester factory loaded shells. At Durham, N. C., April 5, J. J. M. Hawkins broke 99 out of 100, and 147 out of 150. Geo. L. Lyon broke 96 out of 100, and 140 out of 150. April 7, at Raleigh, Mr. Hawkins broke 97 out of 100 and was high man; Mr. Lyon was second. At Wilson, N. C., April 8, Mr. Hawkins broke 100 straight; R. E. Crawford was second; Mr. Walls third. At Frenchtown, N. J., April 7-8, L. J. Squier won professional high average; G. L. Wilson first, and S. W. Grubb second amateur average. All used Winchester factory loaded shells. Messrs. Hawkins and Squier used Winchester repeating shotguns.

We are informed that the Marlin Fire Arms Co., of New Haven, Conn., has come into possession of the American Cartridge and Ammunition Company, of Hartford, and on April 12, commenced removing the machinery to their New Haven plant. They purpose to manufacture cartridges on a large scale.

In the recent match for the Arkansas State championship at Little Rock, Ark., April 8, between Messrs. Dickinson and Peay, each contestant used Peters factory loaded shells.

PUBLISHERS' DEPARTMENT.

Pennsylvania Railroad's Washington Tours.

THE Pennsylvania Railroad's eighth three-day personally conducted tour to Washington will leave New York, Brooklyn, Newark, Elizabeth, and Trenton, April 28. Round-trip rates—only difference being in the hotel selected in Washington—are $12 and $14.50 from New York, $10.50 or $13 from Trenton, and proportionate rates from other points. Tickets cover railroad transportation for the round trip and hotel accommodations. A special side trip to Mt. Vernon may also be taken. All tickets are good for ten days, with special hotel rates at expiration of hotel coupon. For itineraries and full information apply to Ticket Agents; Tourist Agents, 263 Fifth avenue, New York; 4 Court street, Brooklyn, or Geo. W. Boyd, General Passenger Agent, Broad Street Station, Philadelphia, Pa.

The reels manufactured by the Carlton Manufacturing Company, of Rochester, N. Y., are fully described in the illustrated catalogue which they send free on application. Among these are their automatic reel and their nine-multiple reel, in which a single revolution of the handle makes the spool revolve nine times, giving thus extraordinary speed and power. The subject is one of keen interest to all anglers.

New Advertisements.

The national trolling gang manufactured by Joseph E. Pepper, of Rome, N. Y., appeals strongly to that multitude of anglers who catch their fish by trolling. Two cents in stamps, sent to the manufacturer, will bring a catalogue describing the different sorts of fishing tackle that he manufactures.

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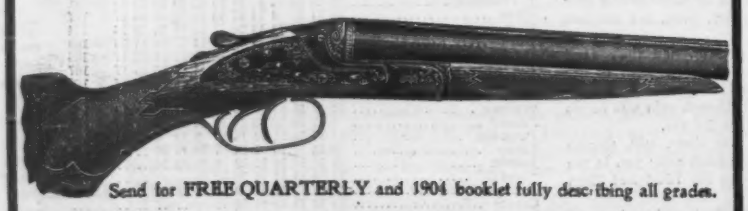

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APR 28 1904

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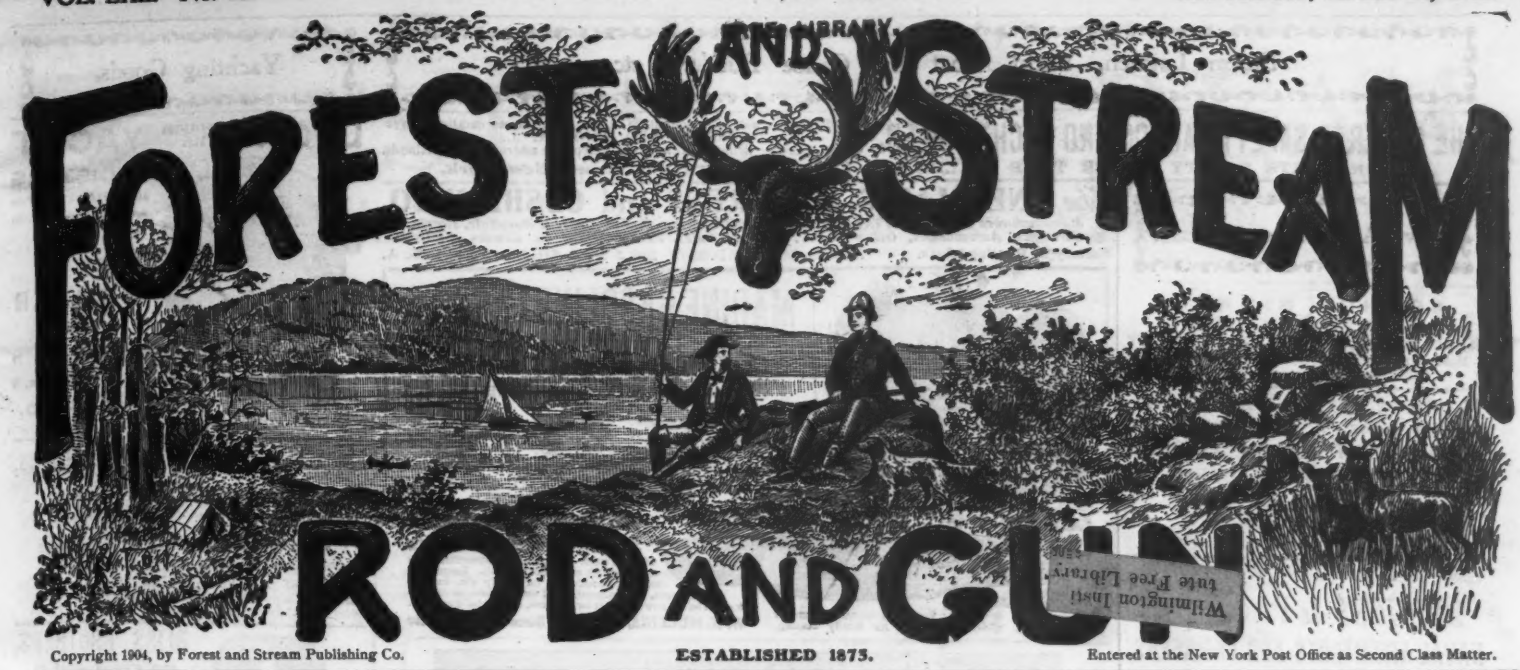
VOL. LXII.—No. 18. SATURDAY, APRIL 30, 1904.



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WHAT BILLY AND OTHERS DID AT BRISTOL

If Bristol, Tenn., were not known to history before, it would be after such shooting as was done there during the big Interstate Tournament, April 6-7. "King William" Crosby broke 195 out of 200 targets the first day, and 198 out of 200 the second day, finishing with a run of 157 straight. H. B. Money won second average, with a score of 383 out of 400, and R. L. Trimble third average, his score being 372. Amongst the amateurs, A. M. Hatcher scored 384 and Bachman 370. All these shooters used Winchester Factory Loaded Shells—a significant fact.

Another shooter who has been demonstrating the reliability and accuracy of Winchester Factory Loaded Shells is J. M. Hawkins, of Baltimore. At Durham, N. C., April 5th, he broke 99 out of 100, and 147 out of 150 targets. At Raleigh, April 7th, he broke 97 out of 100; and at Wilson, N. C., he reached the climax, breaking 100 straight.

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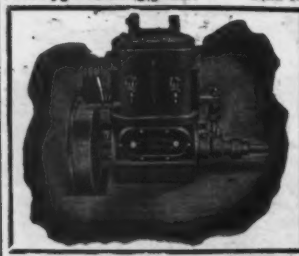

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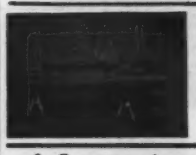

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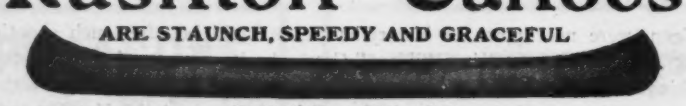

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